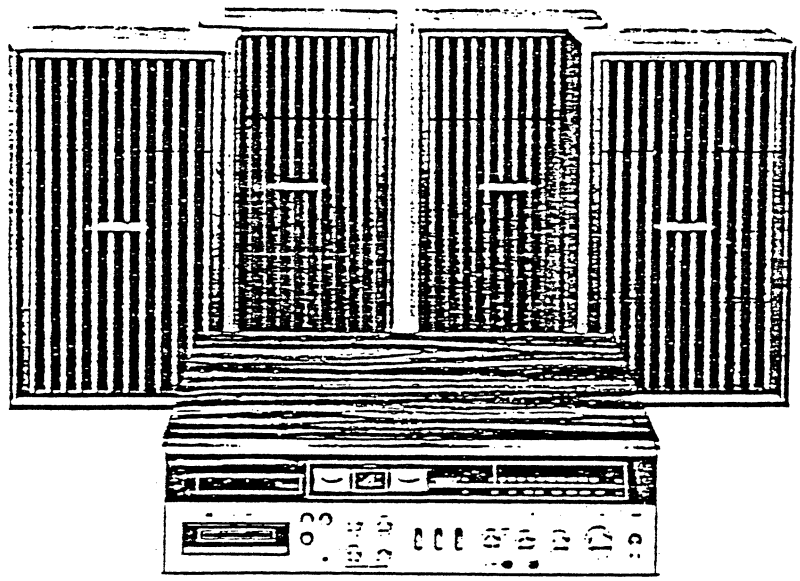
ORDER NO. ARD-7403022

Service Manual

Panasonic
TAPE RECORDER
Panasonic

8-TRACK, 4-CHANNEL PLAYER AND 2-CHANNEL RECORDER W/AM, FM, MPX RADIO



RS-817S MECHANISM SERIES

MODEL RS-862S

SPECIFICATIONS

Power Source:	AC: 120 volts. 50/60 Hz
Power Consumption:	60 W
Motor:	Mechanical governor motor
Power Output:	40 W (10 W × 4)...PMPO
Operation:	Cartridge slide-in mechanism
Track System:	8-track. 4-channel stereo playback 8-track. 2-channel stereo recording and playback
Frequency Response:	30~12.000 Hz
Jacks:	MIC in (2). Line in (4). Phono in (2). EXT speaker (4). MPX out (1). Headphones (2). Remote (1)
Radio Frequency Range:	AM: 525~1.605 kHz FM : 87.5~108 MHz
Dimensions:	Main unit: 21-5/8"(W) × 6-1/8"(H) × 15-5/8"(D) Speaker system: 12-1/4"(W) × 20-3/4"(H) × 6-1/4"(D)
Weight:	Main unit: 19-7/8 lbs. Speaker system: 4-10 lbs.

These specifications are subject to change in order to accommodate improvements in design.

MATSUSHITA ELECTRIC OF CANADA LTD. 40 Ronson Drive. Rexdale. Ont. M9W1B5 CANADA

LOCATION OF PARTS

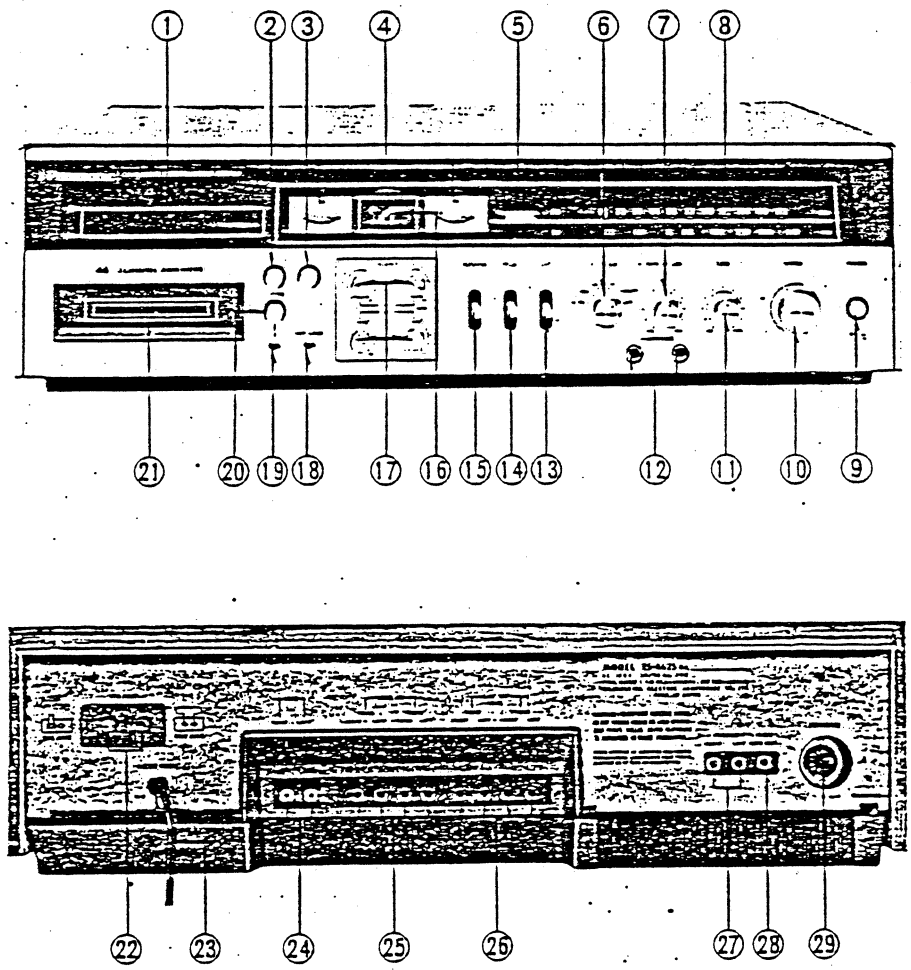


Fig. 1

① Program indicator
② Program selector
③ Fast forward button
④ Level meters
⑤ FM stereo indicator
⑥ Function selector
⑦ Volume control
⑧ Dial scale
⑨ Power switch
⑩ Tuning control
⑪ Tone control
⑫ Front/rear headphone jacks
⑬ AFC (Automatic Frequency Control) switch
⑭ Mode selector
⑮ Monitor switch
⑯ Channel indicator
⑰ Balance control
⑱ End-of-recording indication lamp
⑲ Record indication lamp
⑳ Record button
㉑ Tape slot
㉒ FM antenna terminals
㉓ Power cord
㉔ Microphone jacks
㉕ Line input jacks
㉖ External speaker jacks
㉗ Phono jacks
㉘ Four-channel multiplex output jack
㉙ Remote balance jack

DISASSEMBLY INSTRUCTIONS

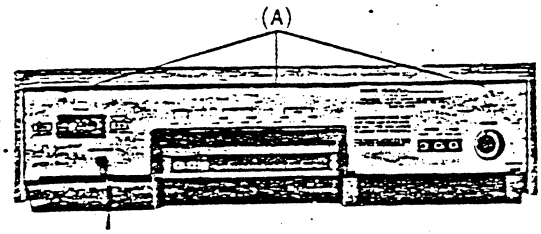


Fig. 2

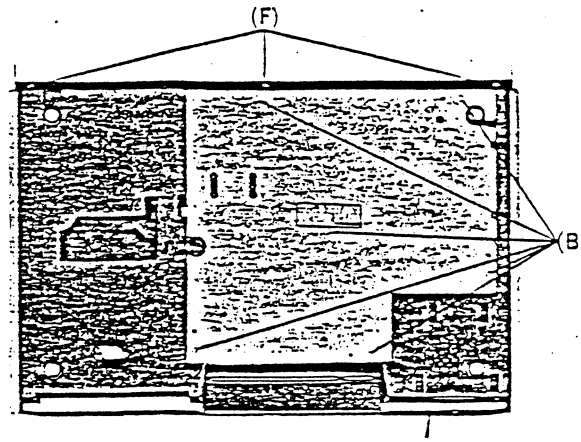


Fig. 3

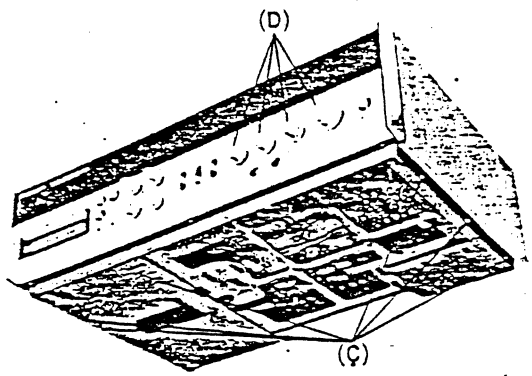


Fig. 4

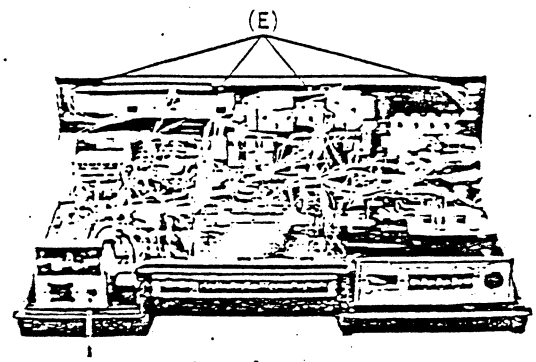


Fig. 5

HOW TO REMOVE BOTTOM BOARD AND BACK BOARD

1. Remove 3 back board screws (A) and remove the back board. (See fig. 2.)
2. Remove 6 bottom board screws (B) and remove the bottom board. (See fig. 3.)

HOW TO REMOVE BODY CASE

1. Remove 6 body case screws (C) shown in fig. 4 and remove the body case.

HOW TO REMOVE PANEL

1. Remove 4 knobs (D) shown in fig. 4 and 4 panel screws (E) shown in fig. 5 and 3 panel screws (F) shown in fig. 3.
2. Remove the panel.

HOW TO REMOVE MECHANISM

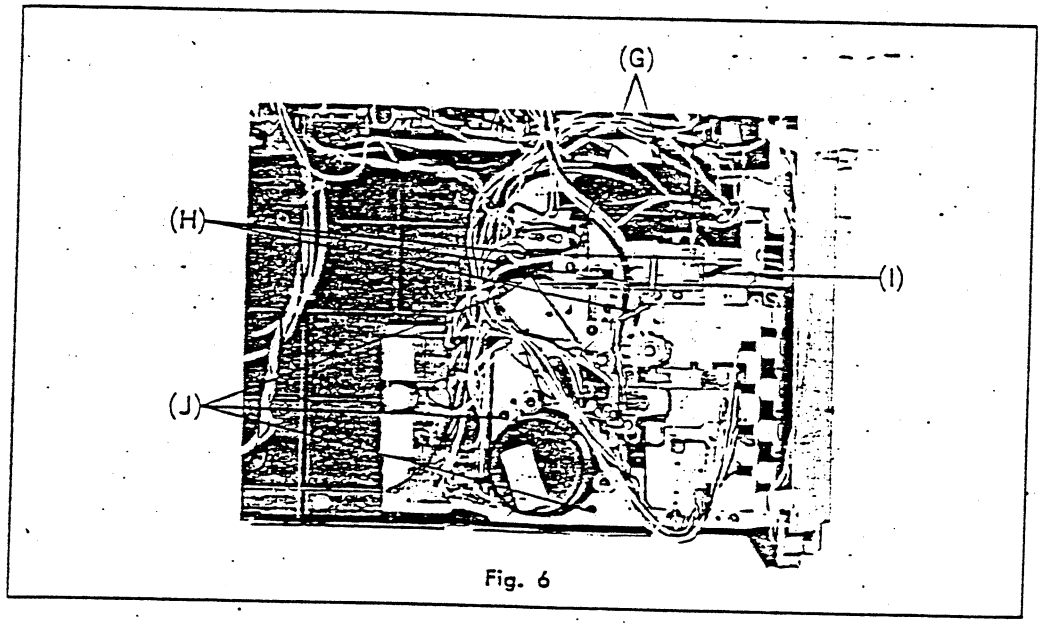


Fig. 6

1. Remove 3 springs (H), 2 screws (G) and remove a record mechanism assembly (I).
2. Remove 3 mechanism screws (J), and remove the mechanism. (See fig. 6.)

HOW TO REMOVE MAIN CIRCUIT BOARD

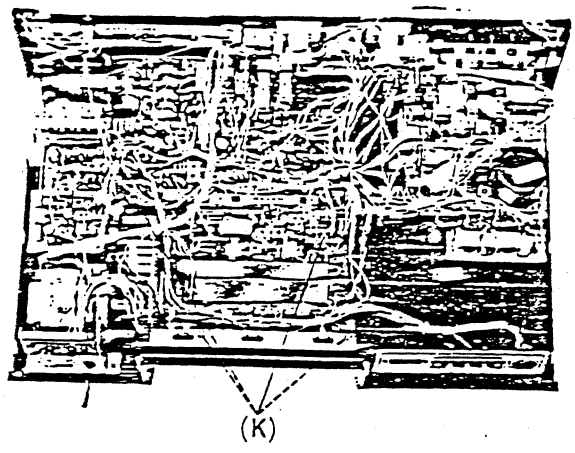


Fig. 7

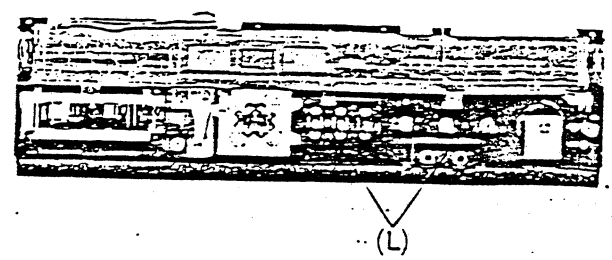


Fig. 8

1. Remove 4 circuit board screws (K) shown in fig. 7 and 2 screws (L) shown in fig. 8.
2. Remove the main circuit board.

MECHANICAL ADJUSTMENTS
Ajustements mécaniques

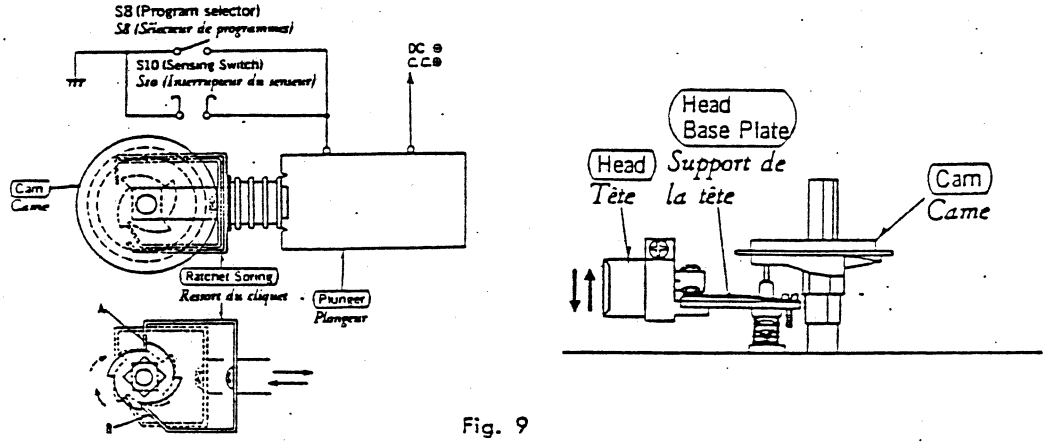


Fig. 9

PROGRAM SELECTION (See fig. 9.)

Manual selection

1. When program button is pressed. the plunger is activated.
2. Plunger pulls the ratchet spring momentarily to the right then it returns to it's normal position.
3. Ratchet spring turns the cam.
4. As the cam rotates. the head moves up and down and program is selected.

Automatic selection

A sensing foil is attached to the cartridge tape. The plunger functions when the sensing switch is closed by the sensing foil. thereby programing is automatic.

Sélection du programme (Voir fig. 9.)

Sélection manuelle

1. Le plongeur est actionné lorsqu'on presse le sélecteur de programmes.
2. Le plongeur tire momentanément le ressort du cliquet vers la droite, puis revient à sa position initiale.
3. Le ressort du cliquet fait tourner la came.
4. Lorsque la came tourne, la tête se déplace de haut en bas et de bas en haut, ce qui sélectionne le programme.

Sélection automatique

Une lame sensible est fixée sur la cartouche. Lorsque l'interrupteur est fermé par cette lame, le plongeur est actionné et la programmation s'effectue automatiquement.

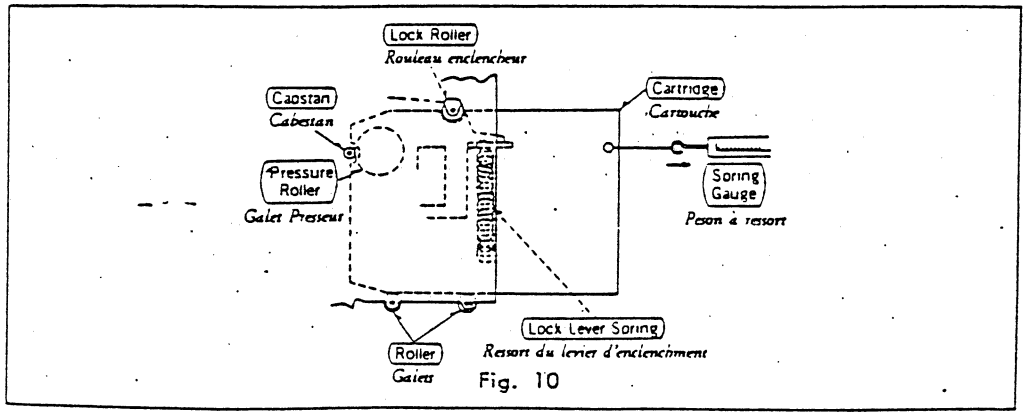


Fig. 10

PRESSURE ROLLER TEST (See fig. 10.)

Instruments required: Standard cartridge for measuring of pressure roller, spring gauge.
Measuring method: Insert the standard cartridge in the tape slot and take the measurement by pulling it with the spring gauge.
Standard value: 1,200±200 gr.

Vérification de la pression du galet (Voir fig. 10.)

Instruments nécessaires: Cartouche standard pour la mesure de pression du galet. Peson à ressort.
Méthode à employer: Prendre la mesure en insérant la cartouche dans son logement et en la retirant à l'aide du peson à ressort.
Valeur standard: 1,200±200 g.

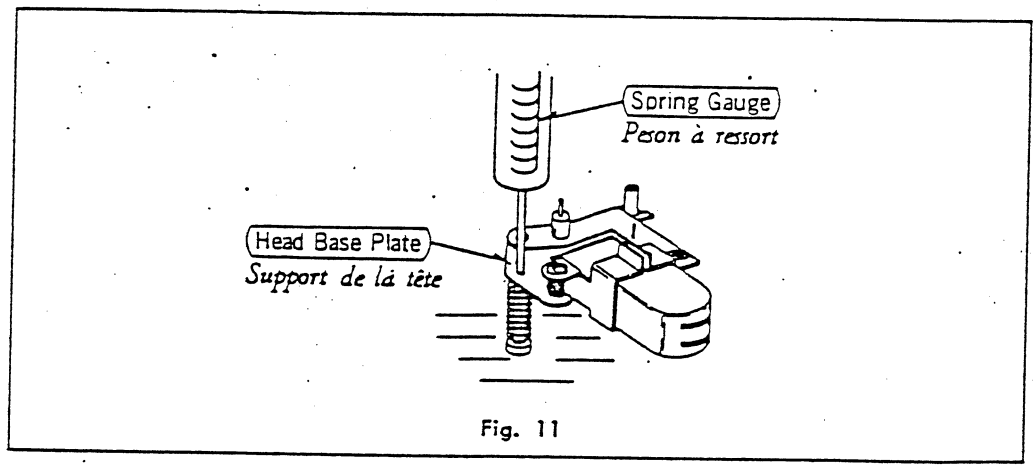


Fig. 11

HEAD TENSION (See fig. 11.)

Instrument required: Spring gauge.
Measuring method: Place the set in the program 1 mode, and take the measurement by pushing the head plate downward with the spring gauge.
Standard value: 110±20 gr.

Tension de la tête (Voir fig. 11.)

Instrument nécessaire: Peson à ressort.
Méthode à employer: Placer le sélecteur sur le programme #1 et prendre la mesure en poussant le support de la tête vers le bas, à l'aide du peson à ressort.
Valeur standard: 110±20 g.

AMPLIFIER ADJUSTMENTS
Ajustements de l'amplification

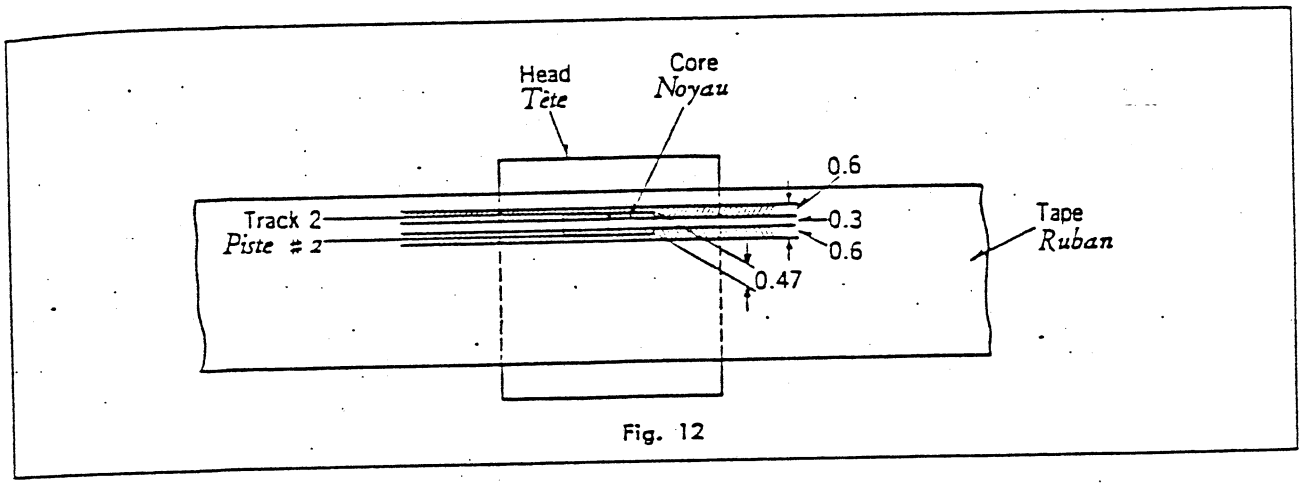


Fig. 12

HEAD HEIGHT ADJUSTMENT (See figs. 12 and 13.)

NOTE

TEST TAPE VTT-801 is recorded with a 1 kHz tone above and below track 2. When adjusting, if the tone gets louder, adjust for minimum by turning the adjustment screw (A) in the opposite direction. (See fig. 13.)

1. Set the tape player to program 2.
2. Play the test tape and adjust the screw (A) for minimum sound on channel 1.

Réglage de hauteur de la tête (Voir fig. 12 et fig. 13.)

Remarques

Un signal de 1 kHz, situé au-dessus et en-dessous de la piste #2, est enregistré sur le ruban d'essai VTT-801. Pour effectuer le réglage, tourner la vis "A" (fig. 13) dans le sens où la puissance du signal devient minimale.

1. Placer le lecteur de ruban sur le programme #2.
2. Effectuer la lecture du ruban d'essai et régler la vis "A" pour obtenir un son minimum sur le canal 1.

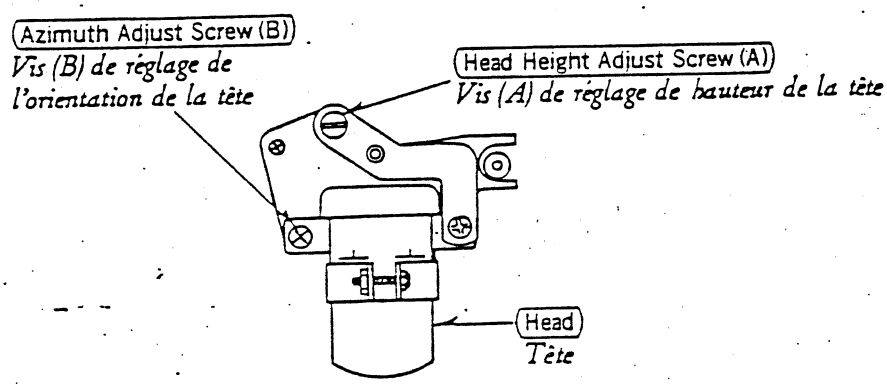

Azimuth Adjust Screw (B)
Vis (B) de réglage de l'orientation de la tête
Head Height Adjust Screw (A)
Vis (A) de réglage de hauteur de la tête
Head
Tête

Fig. 13

HEAD AZIMUTH ADJUSTMENT (See fig. 13.)

1. Set the tape player to program 2.
2. Connect two VTVMs to the output of the left and right channels.
3. Using either an TEST TAPE VTT-801 or recorded music tape, play the tape and adjust the azimuth screw (B) in fig.13 for a balanced maximum output.

Réglage de l'orientation de la tête (Voir fig. 13.)

1. Placer le lecteur de ruban sur le programme #2.
2. Connecter deux "VTVM" à la sortie des canaux droit et gauche.
3. Effectuer la lecture du ruban d'essai ou d'une musique enregistrée et régler la vis "B" (fig. 13) afin d'obtenir un équilibre maximum des deux canaux.

CROSSTALK ADJUSTMENT

NOTE

TEST TAPE VTT-804 has 400 Hz tone on channels 1, 3, 5, and 7, and no signal on channels 2, 4, 6, and 8.

1. Using the VTVM, play each channel at 0 dB and measure the power ratio between each odd and even numbered track.
2. The standard value should be at least 50 dB.
3. If the power ratio is out of tolerance, repeat the height and azimuth adjustment.
4. Lock screws A and B in place, using glyptal or glue.

Réglage de la diaphonie

Remarques

Sur le ruban d'essai VTT-804, un signal de 400 Hz est enregistré sur les canaux 1, 3, 5 et 7, tandis qu'aucun n'apparait sur les canaux 2, 4, 6 et 8.

1. Effectuer la lecture de chaque canal à 0 dB et mesurer, à l' aide d'un "VTVM", le rapport de puissance entre chaque piste numérotée pair et impair.
2. La valeur standard devra être de 50 dB minimum.
3. Si le rapport de puissance est en dehors des tolérances, refaire les réglages de la hauteur et d'orientation de la tête.
4. Sceller les vis (A) et (B) en place avec de la peinture ou de la colle.

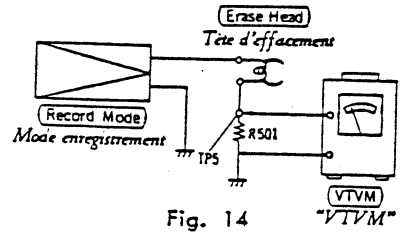


Fig. 14

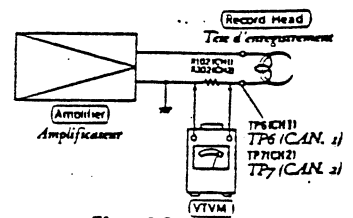


Fig. 15

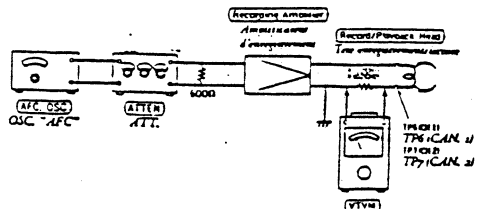


Fig. 16

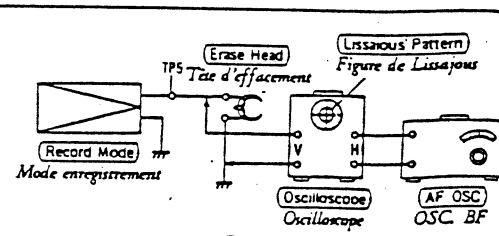


Fig. 17.

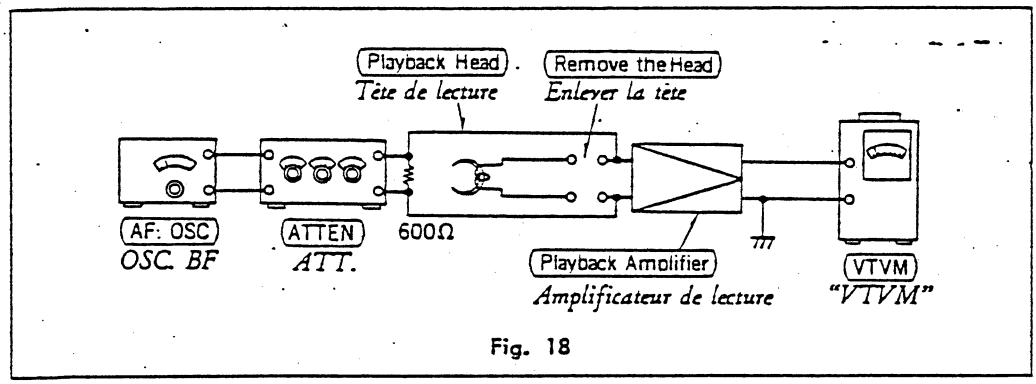


Fig. 18

AMPLIFIER ADJUSTMENTS

Measurement condition:

Voltage .....120 V
Function selector .....Tape
Mode selector .....Stereo
Volume control .....Maximum
Tone control .....Center
Balance control .....Center

Instruments required:

VTVM, AF OSC, ATT.
Oscilloscope, Resistors (8Ω, 600Ω).

ITEM	SIGNAL SOURCE CONNECTION	OUTPUT-CONNECTION	MODE	ADJUSTMENT	SPEC.	REMARKS
Adjustment of erase current.	——	VTVM to TP5. See figs. 14 and 24.	Record	L501 and VR501 See fig. 24.	1.7 V	Adjust L501 for maximum and then adjust VR501 for 1.7 V.
Adjustment of trap coil.	——	VTVM to TP6 (for CH1) TP7 (for CH2) See figs. 15 and 24.	Record	L105 (for CH1) L305 (for CH2) See fig. 24.	Minimum	Set volume control to minimum.
Adjustment of trap coil.	——	VTVM to EXT SP jack.	Record	L106 (CH1). L306 (CH2) See fig. 24.	Minimum	Set volume control to minimum.
Test of recording level.	1 kHz. −74 dB to MIC input jack. See fig. 16.	VTVM to TP6 (for CH1) TP7 (for CH2) See figs. 16 and 24.	Record	——	7.7 mV	Stop the bias oscillation by cutting lead of R509 shown in page 16.
Test of oscillation frequency.	——	Oscilloscope with the AF OSC to TP5. See figs. 17 and 24.	Record	——	$35 \pm \frac{}{5}$ kHz	Adjust the AF OSC to obtain a circular and stationary Lissajous pattern on the oscilloscope. The oscillation frequency is indicated by the scale of the AF OSC.
Test of playback amplifier gain.	1 kHz. −90 ± 3 dB as shown in fig. 18.	VTVM to EXT speaker jack.	Playback	——	1 V	——

Ajustements de l'amplification

Condition de mesure:

Voltage .....120 volts
Sélecteur de fonctions..."TAPE"
Sélecteur de modes ....."STEREO"
Commande de volume...maximum
Commande de tonalité...au centre
Commande d'équilibre...au centre

Instruments nécessaires:
"VTVM", OSC. BF, ATT., oscilloscope, résistances (8Ω, 600Ω).

SUJET	BRANCHEMENT DE LA SOURCE SONORE	BRANCHEMENT À LA SORTIE	MODE	RÉGLAGE	SPÉC.	REMARQUES
Réglage du courant d'effacement.	——	"VTVM" à TP5 Voir fig. 14 et fig. 24.	Enregistrement	L501 et VR501 Voir fig. 24.	1.7 V	Régler L501 pour un maximum, puis ajuster VR501 à 1.7 V.
Réglage du circuit bouchon.	——	"VTVM" à: TP6 (canal 1) TP7 (canal 2) Voir fig. 15 et fig. 24.	Enregistrement	L105 (canal 1) L305 (canal 2) Voir fig. 24.	Minimum	Placer le volume au minimum.
Réglage du circuit bouchon.	——	"VTVM" à la prise "EXT SP".	Enregistrement	L106 (canal 1) L306 (canal 2) Voir fig. 24.	Minimum	Placer le volume au minimum.
Essai du niveau d'enregistrement.	1 kHz, −74 dB à la prise d'entrée "MIC". Voir fig. 16.	"VTVM" à: TP6 (canal 1) TP7 (canal 2) Voir fig. 16 et fig. 24.	Enregistrement	——	7.7 mV	Arrêter l'oscillation de polarisation en coupant le fil R509 tel que démontré page 16.
Essai de la fréquence d'oscillation.	——	Oscilloscope et OSC. AF à TP5. Voir fig. 17 et fig. 24.	Enregistrement	——	35±5 kHz	Régler l'OSC. AF de manière à obtenir une figure de Lissajous circulaire et stationnaire sur l'écran du scope. La fréquence d'oscillation est indiquée par l'échelle de l'OSC. AF.
Essai du gain de l'amplificateur de lecture.	1 kHz, −90±3 dB comme le montre la fig. 18.	"VTVM" à la prise "EXT SP".	Lecture	——	1 V	——

ALIGNMENT INSTRUCTIONS FOR RADIO
Instructions pour l'alignement de la radio

PROCEDURE FOR DIAL THREADING
Mise en place du fil du curseur

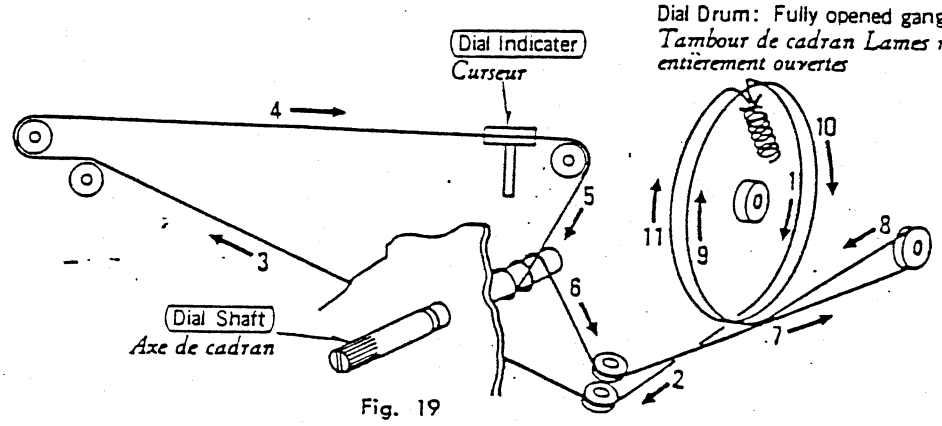


Fig. 19

AM, FM IF AND RF ALIGNMENT

AM IF AND RF ALIGNMENT

Output of signal generator should be no higher than necessary to obtain an output reading.

Voltage .....120 V
Function selector .....AM
Mode selector .....Stereo
Tone control .....Center
Balance control .....Center

SIGNAL GENERATOR COUPLING	SIGNEL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUSTMENT	REMARKS
Fashion a loop of several turns of wire and radiate signal into the loop of receiver.	455 kHz (400 Hz Mod.)	Point of non-interference. (on/about 660 kHz)	Output meter across EXT SP.	T3 (2nd IF) T2 (1st IF) See fig. 24.	Adjust for maximum output.
The same as above.	550 kHz (400 Hz Mod.)	550 kHz	The same as above.	L7 (OSC coil) L6 (ANT coil) See fig. 24.	Adjust for maximum output by sliding the coil (L6) along ferrite core.
The same as above.	1.500 kHz (400 Hz Mod.)	1.500 kHz	The same as above.	C33 (OSC trimmer) C30 (ANT trimmer) See fig. 24.	Adjust for maximum output. Repeat steps 2 and 3.

Note: 1. Cement antenna coil with wax after completing alignment.
2. Make certain that speaker system or 8Ω dummy load is connected to the EXT SP jack when aligning.

Alignement AM, F.I., FM et "RF"

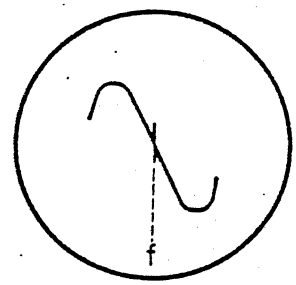
Alignement AM, F.I. et "RF"

La tension de sortie du générateur H.F. ne devra pas excéder celle nécessitée pour obtenir une lecture sur le voltmètre de sortie.

Voltage.....120 V
Sélecteur de fonctions .....“AM”
Sélecteur de modes .....“STEREO”
Commande de tonalité.....au centre
Commande d'équilibre.....au centre

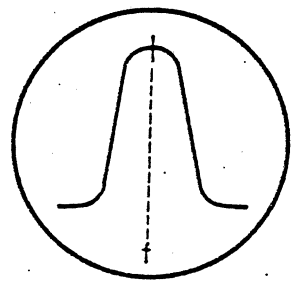
COUPLAGE DU GÉNÉRATEUR DE SIGNAL	FRÉQUENCE DU GÉNÉRATEUR H.F.	POINT DE RÉGLAGE DU CADRAN	INDICATEUR	RÉGLAGES	REMARQUES
Boucler plusieurs tours de fil et coupler-les au cadre du récepteur.	455 kHz (Modulation 400 Hz)	Sur une position sans interférence (environ 660 kHz).	Voltmètre de sortie à la prise: “EXT SP”.	T3 (2ème F.I.) T2 (1ère F.I.) Voir fig. 24.	Régler pour un maximum de sortie.
Comme ci-dessus.	550 kHz (Modulation 400 Hz)	550 kHz	Comme ci-dessus.	L7 (bobine OSC.) L6 (bobine ANT) Voir fig. 24.	Régler pour un maximum de sortie en déplaçant le bobinage (L6) le long du noyau de ferrite.
Comme ci-dessus.	1,500 kHz (Modulation 400 Hz)	1,500 kHz	Comme ci-dessus.	C33 (trimmer OSC.) C30 (trimmer ANT) Voir fig. 24.	Régler pour un maximum de sortie. Répéter les étapes (2) et (3).

Remarques: 1. L'alignement terminé, bloquer le bobinage d'antenne avec de la cire.
2. Avant l'alignement, s'assurer que le systéme haut-parleur, ou une charge fictive de 8 ohms, est bien connecté à la prise “EXT SP”.



f: center frequency of ceramic filter
f: fréquence centrale du filtre céramique

Fig. 20



f: center frequency of ceramic filter
f: fréquence centrale du filtre céramique

Fig. 21

FM IF AND DISCRIMINATOR ALIGNMENT WITH OSCILLOSCOPE

EQUIPMENTS REQUIRED:

Signal generator that provides 10.64, 10.67, 10.7, 10.73, or 10.76 MHz marker according to the center frequency of ceramic filter used in the set.
Sweep generator that provides above center frequencies and 400 Hz sweep width.
Oscilloscope: Set sweep selector of oscilloscope to EXTERNAL SWEEP.
Apply 60 Hz sweep signal from the sweep generator to horizontal input terminals of oscilloscope.

MEASUREMENT CONDITION:

Voltage .....120 V
Function selector .....FM
Mode selector .....Stereo
Balance control.....Center
Tone control .....Center

Note: For alignment of step 1 below, before aligning, unsolder lead between test point TP2 and A, resolder it after alignment. (See fig. 24)

	SWEEP GENERATOR COUPLING	SIGNAL GENERATOR COUPLING	RADIO DIAL SETTING	INDICATOR	ADJUSTMENT	REMARKS
1	High side through 0.001μF to point TP1 shown in fig. 24. Common to chassis.	High side thru. 0.001μF to TP1 shown in fig. 24.	Point of non-interference (on/about 90 MHz)	Connect vert. amp. of oscilloscope to TP2. See fig. 24.	T5 Core A T4 (2nd IF) T1 (1st IF) See fig. 24.	Adjust for maximum amplitude and proper linearity between ±100 kHz markers. See fig. 20.
2	The same as above.	The same as above.	The same as above.	Connect vert. amp. of oscilloscope to TP3. See fig. 24.	T5 Core B See fig. 24.	To obtain proper line arity shown in fig. 21.

Alignement F.I. FM et discriminateur à l'aide d'un oscilloscope

Equipement nécessaire:

Générateur H.F. fournissant des marqueurs à 10.64, 10.67, 10.7, 10.73 ou 10.76 MHz selon la fréquence centrale du filtre céramique utilisé dans l'appareil.

Générateur de balayage permettant les fréquences standard ci-dessus et une largeur de balayage de 400 kHz.

Oscilloscope: Placer le sélecteur de balayage de l'oscilloscope à la position "EXTERNAL SWEEP". Appliquer, à l'aide du générateur de balayage, un signal de 60 kHz aux entrées de la déflexion horizontale de l'oscilloscope.

Condition de mesure:

Voltage.....120 V
Sélecteur de fonctions .....“FM”
Sélecteur de modes .....“STEREO”
Commande d'équilibre .....au centre
Commande de tonalité .....an centre

Remarque: Avant d'effectuer l'étape 1 (ci-dessous) de la procédure d'alignement, dessouder le fil reliant le point d'essai TP2 et "A". L'alignement terminé, ressouder ce fil. (Voir fig. 24.)

COUPLAGE DU GÉNÉRATEUR DE BALAYAGE	COUPLAGE DU GÉNÉRATEUR H.F.	POINT DE RÉGLAGE DU CADRAN	INDICATEUR	RÉGLAGES	REMARQUES
Le point chaud au point TP1 (fig. 24) à travers une capacité de 0.001 μF. Commun au châssis.	Le point chaud au point TP1 (fig. 24) à travers une capacité de 0.001 μF.	Sur une position sans interférence. (Environ 90 MHz)	Connecter l'ampli vertical de l'oscilloscope au point TP2. Voir fig. 24.	T5 noyau "A" T4 (2ème F.I.) T1 (1ère F.I.). Voir fig. 24.	Régler pour un maximum d'amplitude et une linéarité correcte entre les marqueurs ±100 kHz. Voir fig. 20.
Comme ci-dessus.	Comme ci-dessus.	Comme ci-dessus.	Connecter l'ampli vertical de l'oscilloscope au point TP3. Voir fig. 24.	T5 noyau "B" Voir fig. 24.	Pour obtenir une linéarité correcte, tel que démontré à la fig. 21.

FM RF ALIGNMENT

Output of the signal generator should be no higher than necessary to obtain an output reading.

Voltage .....120 V
Function selector .....FM
Mode selector .....Stereo
Tone control .....Center
Balance control.....Center

SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUSTMENT	REMARKS
Connect to EXT FM antenna terminal shown in fig. 1. through FM dummy antenna shown in fig. 22.	90 MHz (400 Hz Mod.)	90 MHz	Output meter across EXT SP jack. See fig. 1.	L3 (OSC coil) L1 (ANT coil) L2 (Collector coil) See fig. 24.	Adjust for maximum output.
The same as above.	106 MHz (400 Hz Mod.)	106 MHz	The same as above.	C19 (OSC trimmer) C2 (ANT trimmer) C11 (Collector trimmer) See fig. 24.	Adjust for maximum output. Repeat steps 3 and 4.

Note: 1. For FM alignment, remove line cord antenna from FM antenna terminal.
2. Whenever three output response peaks are noted, adjust for center response.

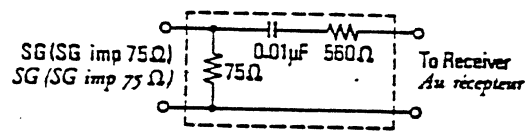
Alignement FM "RF"

La tension de sortie du générateur H.F. ne devra pas excéder celle nécessitée pour obtenir une lecture sur le voltmètre de sortie.

Voltage.....120 V
Sélecteur de fonctions .....“FM”
Sélecteur de modes .....“STEREO”
Commande de tonalité .....au centre
Commande d'équilibre .....au centre

	COUPLAGE DU GÉNÉRATEUR H.F.	FREQUENCE DU GÉNÉRATEUR H.F.	POINT DE RÉGLAGE DU CADRAN	INDICATEUR	RÉGLAGES	REMARQUES
3	Brancher à la borne d'antenne “EXT FM” (fig. 1) à travers une antenne fictive FM, tel que démontré fig. 22.	90 MHz (Modulation 400 Hz)	90 MHz	Voltmètre de sortie à la prise “EXT SP”. Voir fig. 1.	L3 (bobine OSC.) L1 (bobine ANT.) L2 (bobine du collecteur) Voir fig. 24.	Régler pour un maximum de sortie.
4	Comme ci-dessus.	106 MHz (Modulation 400 Hz)	106 MHz	Comme ci-dessus.	C19 (trimmer - OSC.) C2 (trimmer ANT.) C11 (trimmer collecteur) Voir fig. 24.	Régler pour un maximum de sortie. Répéter les étapes 3 et 4.

Remarques: 1. Pour effectuer l'alignement FM, déconnecter le fil d'antenne de la borne “EXT FM”.
2. Chaque fois que trois pointes d'accord sont remarquées, règler sur la fréquence centrale.



FM Dummy Antenna
Antenne FM fictive

Fig. 22

FM-STEREO ALIGNMENT

MULTIPLEX COIL AND SEPARATION ALIGNMENT

EQUIPMENTS REQUIRED:

Stereo modulator.....Connect the stereo modulator output to EXT Mod. terminal of signal generator.
Signal generator .....Modulation rate by 19 kHz pilot signal .....8~10%
Modulation rate by left signal 27%
Output level .....40 dB
Frequency .....Approx. 98 MHz
Oscilloscope
FM dummy antenna
VTVM
Low pass filter

SETTING OF CONTROLS:

Function selector.....FM AUTO
Mode selector .....Stereo
Dial setting .....Approx. 98 MHz
Tone control .....Center
Balance control.....Center
Volume control.....No higher than necessary to obtain an output reading

Alignement FM stéréo

Alignement de la séparation et du bobinage multiplex

Equipement nécessaire:

Modulateur stéréo .....Connecter la sortie du modulateur stéréo à la borne "EXT Mod." du générateur H.F.

Générateur H.F. .....Taux de modulation par le signal pilote de 19 kHz .....8 à 10%.

Taux de modulation par le signal de gauche .....27%.

Niveau de sortie .....40 dB.

Fréquence .....approx. 98 MHz.

Oscilloscope

Antenne FM fictive

"VTVM"

Filtre passe-bas

Position des commandes:

Sélecteur de fonctions ....."FM AUTO"

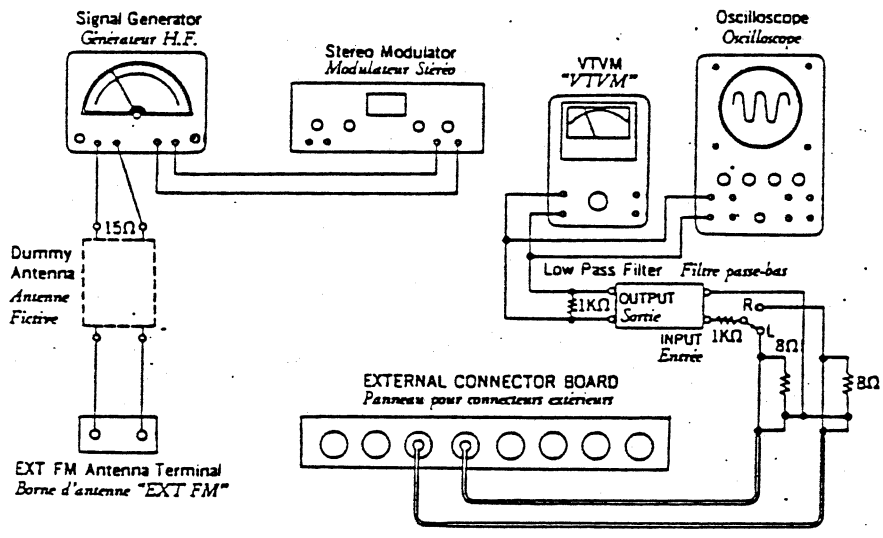
Sélecteur de modes ....."STEREO"

Position du curseur .....approx. 98 MHz

Commande de tonalité .....au centre

Commande d'équilibre .....au centre

Commande de volume .....Pas plus élevé qu'il est nécessaire pour obtenir une lecture à la sortie.



Recommended Equipment Connection for Multiplex Coil Alignment
Branchement recommandé pour l'équipement nécessaire à l'alignement du bobinage multiplex.

Fig. 23

ITEM	SIGNAL SOURCE CONNECTION	EQUIPMENT CONNECTION	ADJUSTMENT	REMARKS
Adjustment of pilot signal.	98 MHz. 30 dB See fig. 23.	TP4 See fig. 24.	T6 (both cores) See fig. 24.	Set stereo (L+R) modulation to zero. Modulate by pilot signal only, and adjust for maximum.
Adjustment of separation.	98 MHz. 60 dB	Connect VTVM with 8Ω to EXT SP jack. See fig. 1.	Core B of T6 and VR1: See fig. 24.	Adjust volume control so that CH1 output becomes 0.63 V. Slightly adjust the core A of T6 so that the output becomes maximum. Then change the modulation by R signal only, and adjust semi-fixed variable resistor VR1 so than CH1 output becomes minimum. Likewise modulate by L signal only, and adjust VR1 so that CH2 output becomes minimum.
Measurement of stereo eye lighting level.	98 dB	—	—	Adjust the output of signal generator, and make sure that the stereo eye lights at 13~26 dB.

Note: When aligning, remove line cord antenna from FM antenna terminal.

SUJET	BRANCHEMENT DU GÉNÉRATEUR	BRANCHEMENT DE L'ÉQUIPEMENT	RÉGLAGES	REMARQUES
Réglage du signal pilote.	98 MHz, 30 dB Voir fig. 23.	TP4 Voir fig. 24.	T6 Les deux noyaux.	Placer la modulation stéréo (L+R) à zéro. Moduler seulement avec le signal pilote et régler pour un maximum.
Réglage de la séparation.	98 MHz, 60 dB	Connecter un "VTVM" et une résistance de 8Ω à la prise "EXT SP". Voir fig. 1.	Noyau "B" de T6 et VR1. Voir fig. 24.	Régler le volume pour obtenir 0.63 V à la sortie du canal 1. Ajuster légèrement le noyau "A" de T6 pour obtenir un maximum de tension de sortie. Puis moduler par le signal droit seulement, et ajuster la résistance variable VR1 pour que la tension de sortie du canal 1 devienne minimale. Ensuite moduler par le signal gauche seulement, et ajuster VR1 pour que la tension de sortie du canal 2 devienne minimale.
Mesure du niveau auquel le témoin stéréo s'allume.	98 dB	—	—	Régler la tension de sortie du générateur H.F. et vérifier si le témoin stéréo s'allume à 13~26 dB.

Remarque: Pour effectuer l'alignement, déconnecter le fil d'antenne de la borne "EXT FM".

ADJUST PARTS LOCATION

Emplacement des éléments de réglage

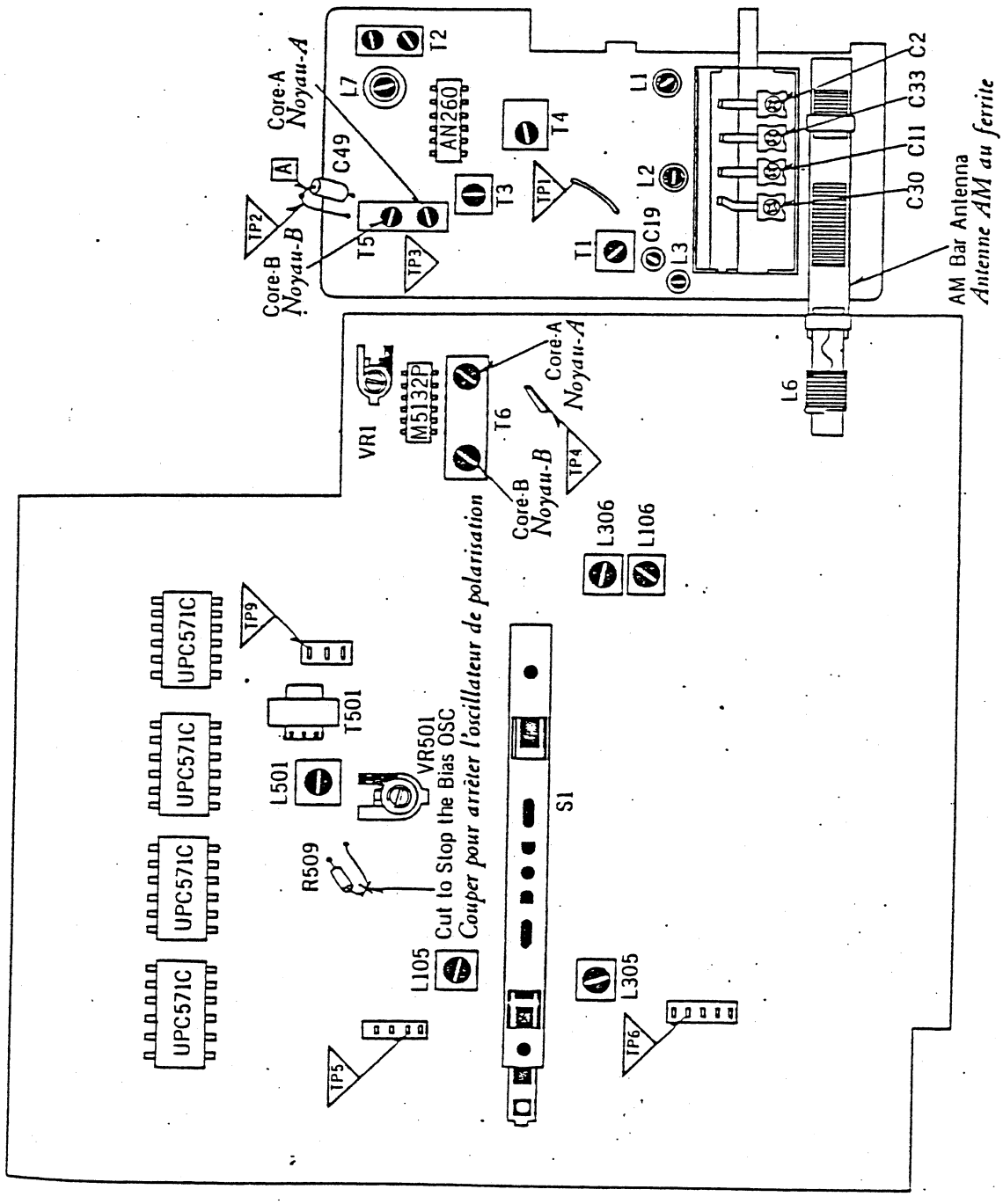
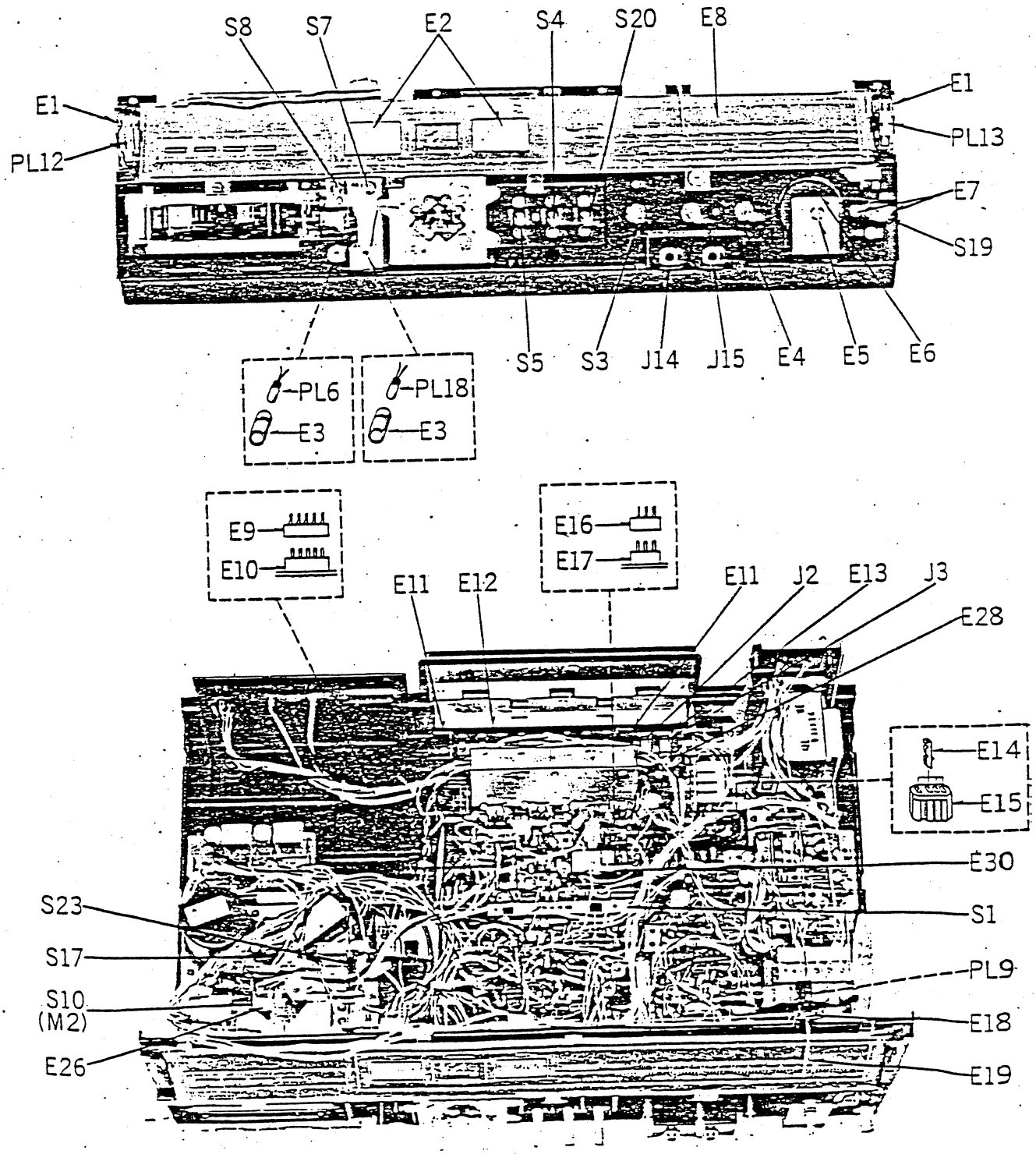
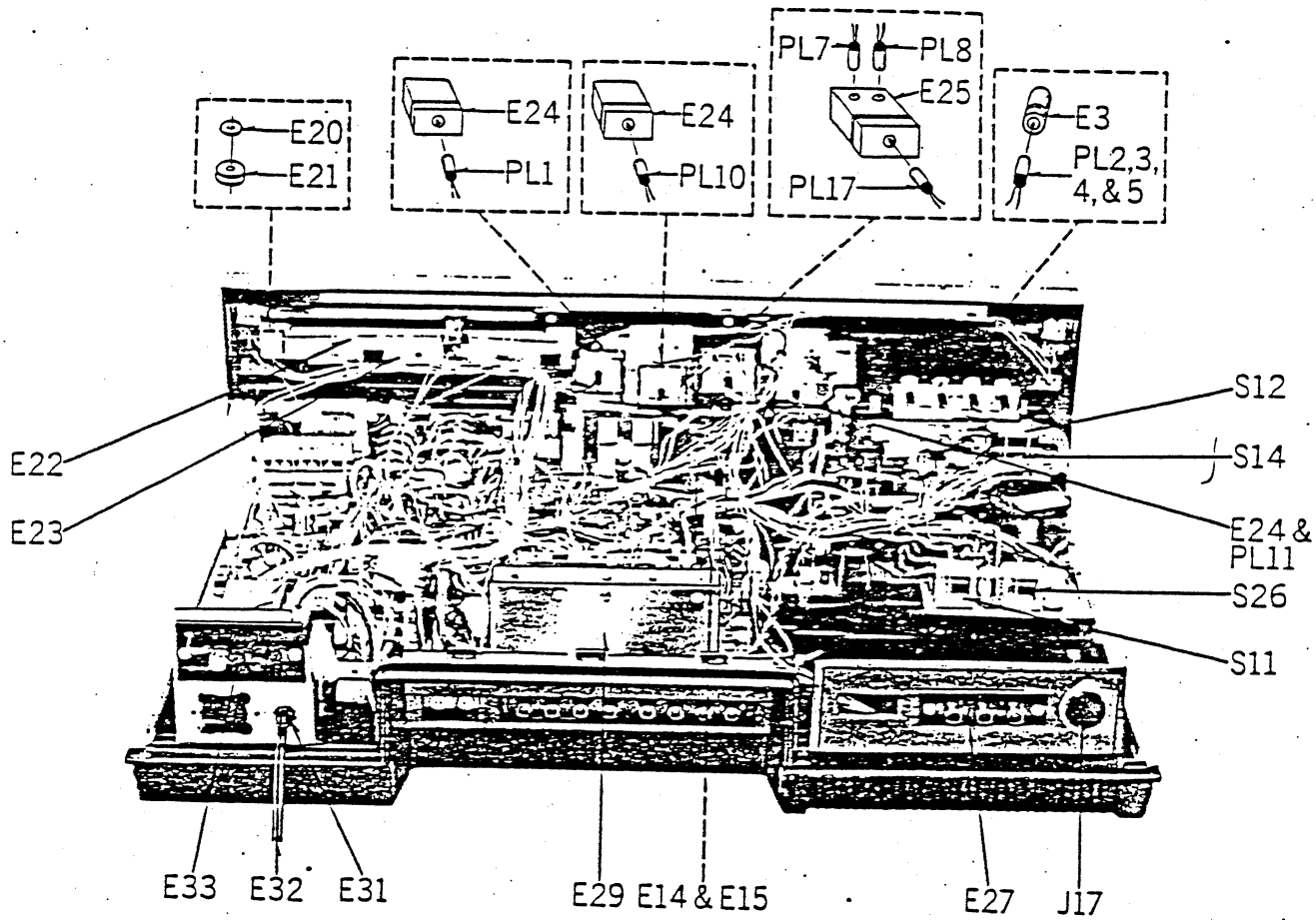
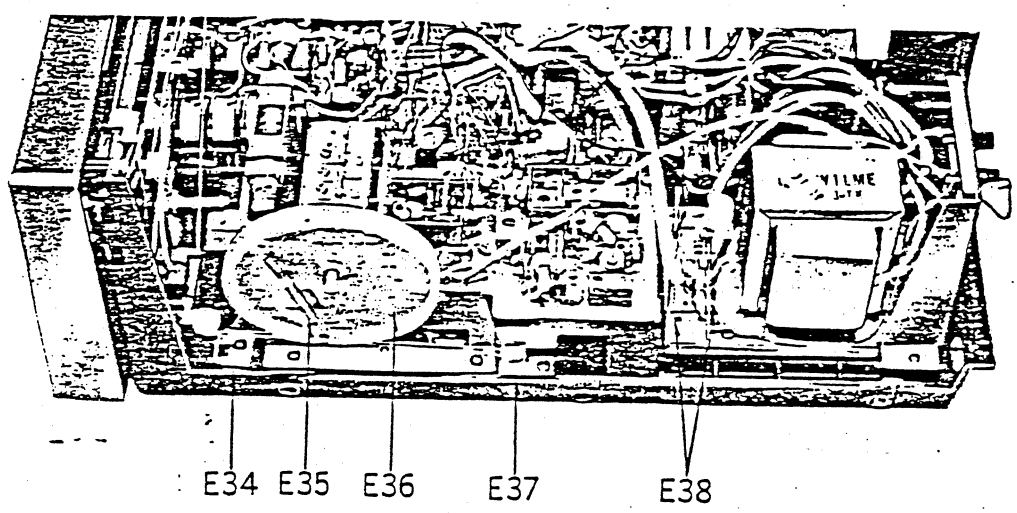


Fig. 24

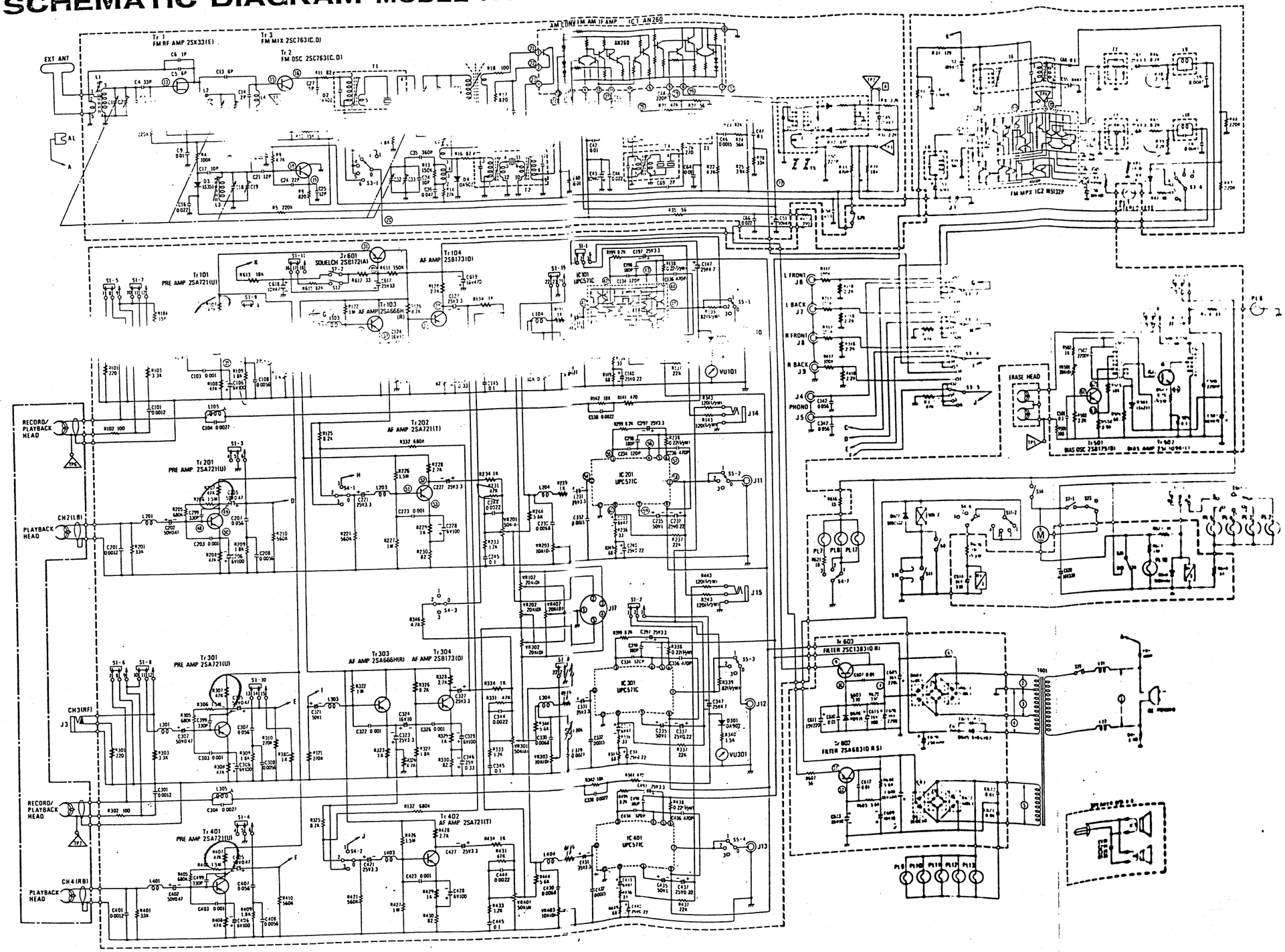
ELECTRICAL PARTS LOCATION



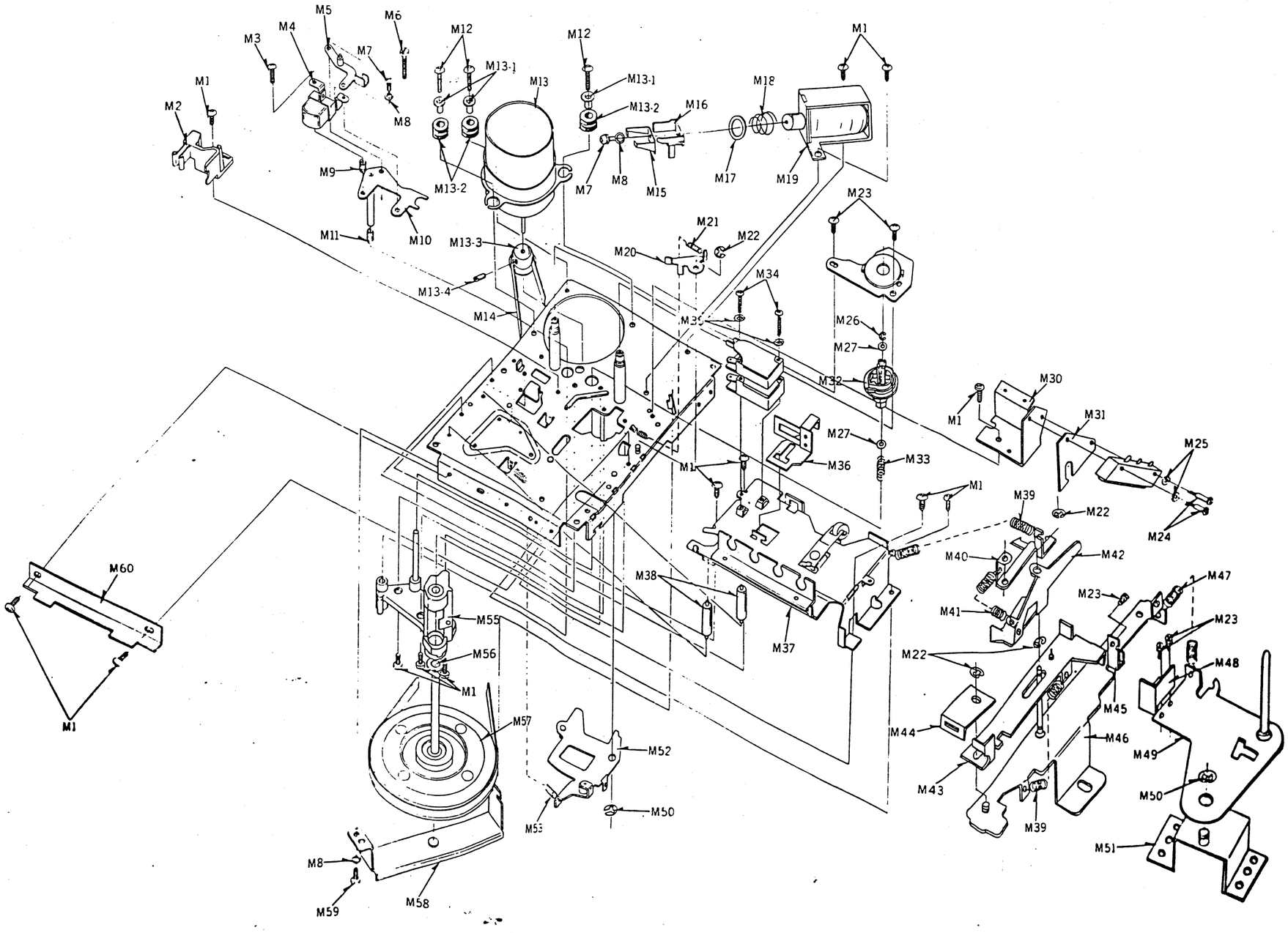

E20
E21
E24
PL1
E24
PL10
PL7
PL8
E25
PL17
E3
PL2,3,
4,&5
S12
S14
E24 &
PL11
S26
S11
E22
E23
E33
E32
E31
E29
E14 & E15
E27
J17


E34
E35
E36
E37
E38

SCHEMATIC DIAGRAM MODEL RS-862S

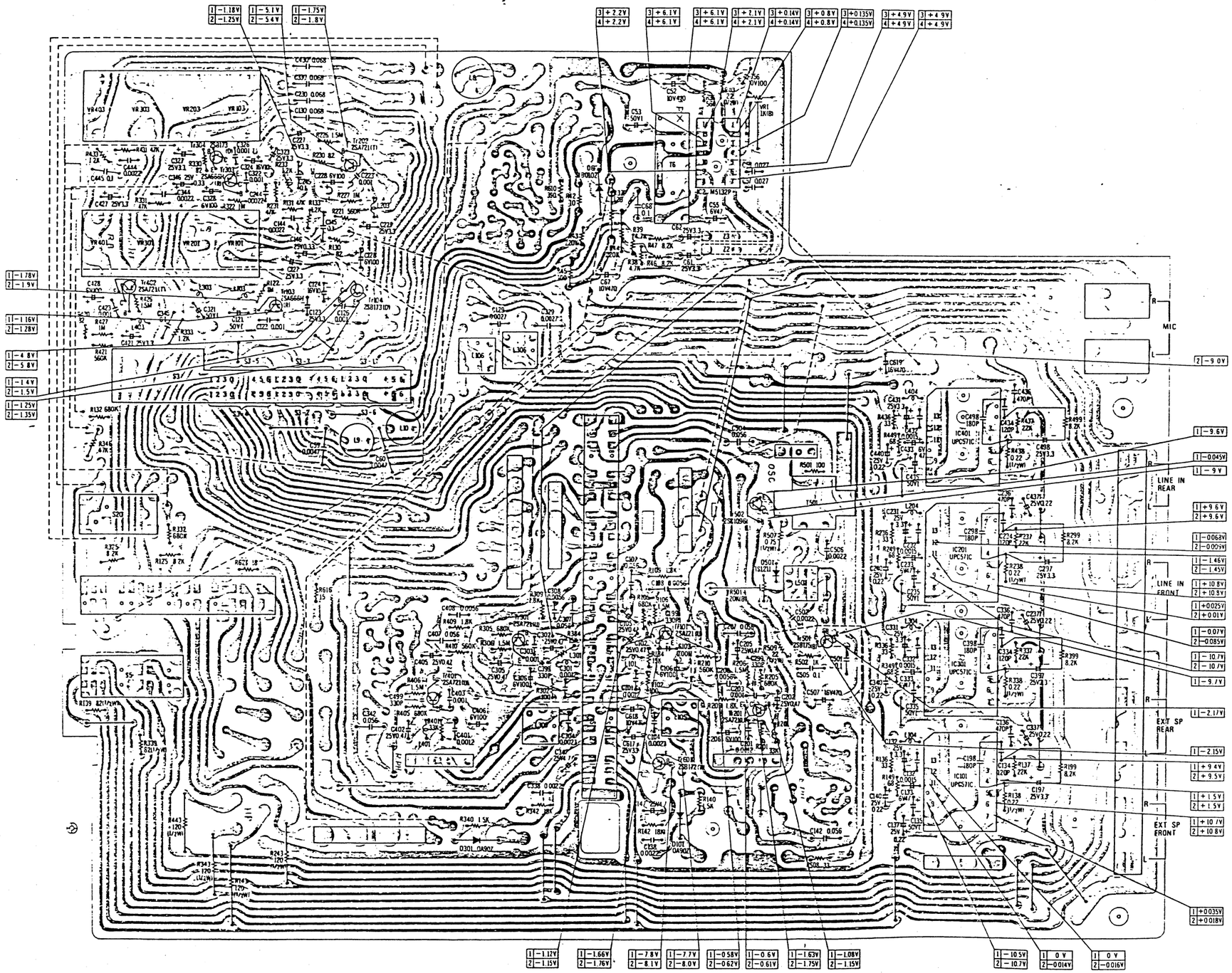


EXPLODED VIEWS

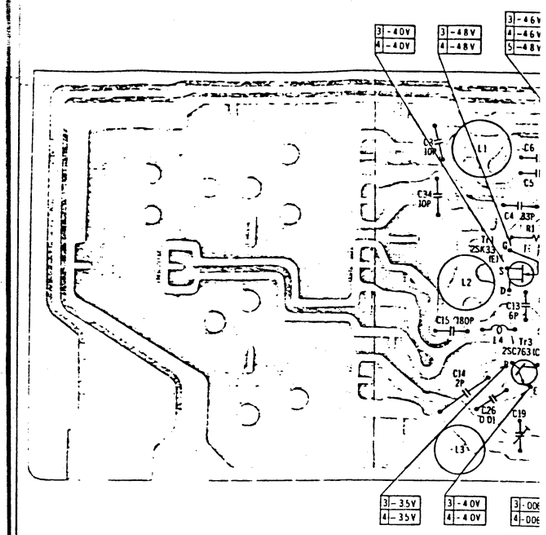


CIRCUIT BOARD

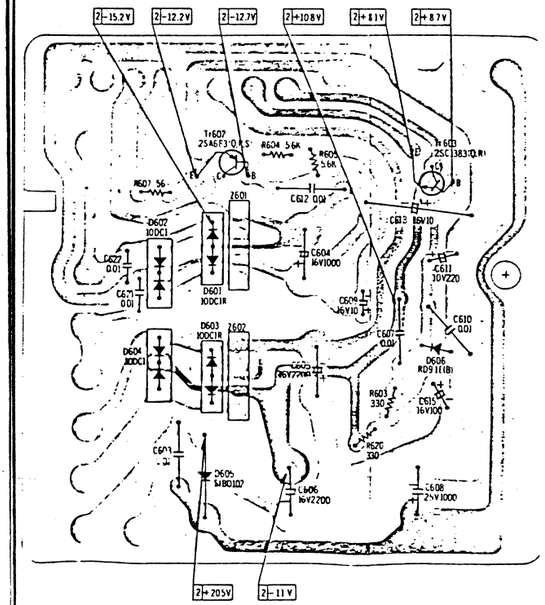
MAIN CIRCUIT BOARD

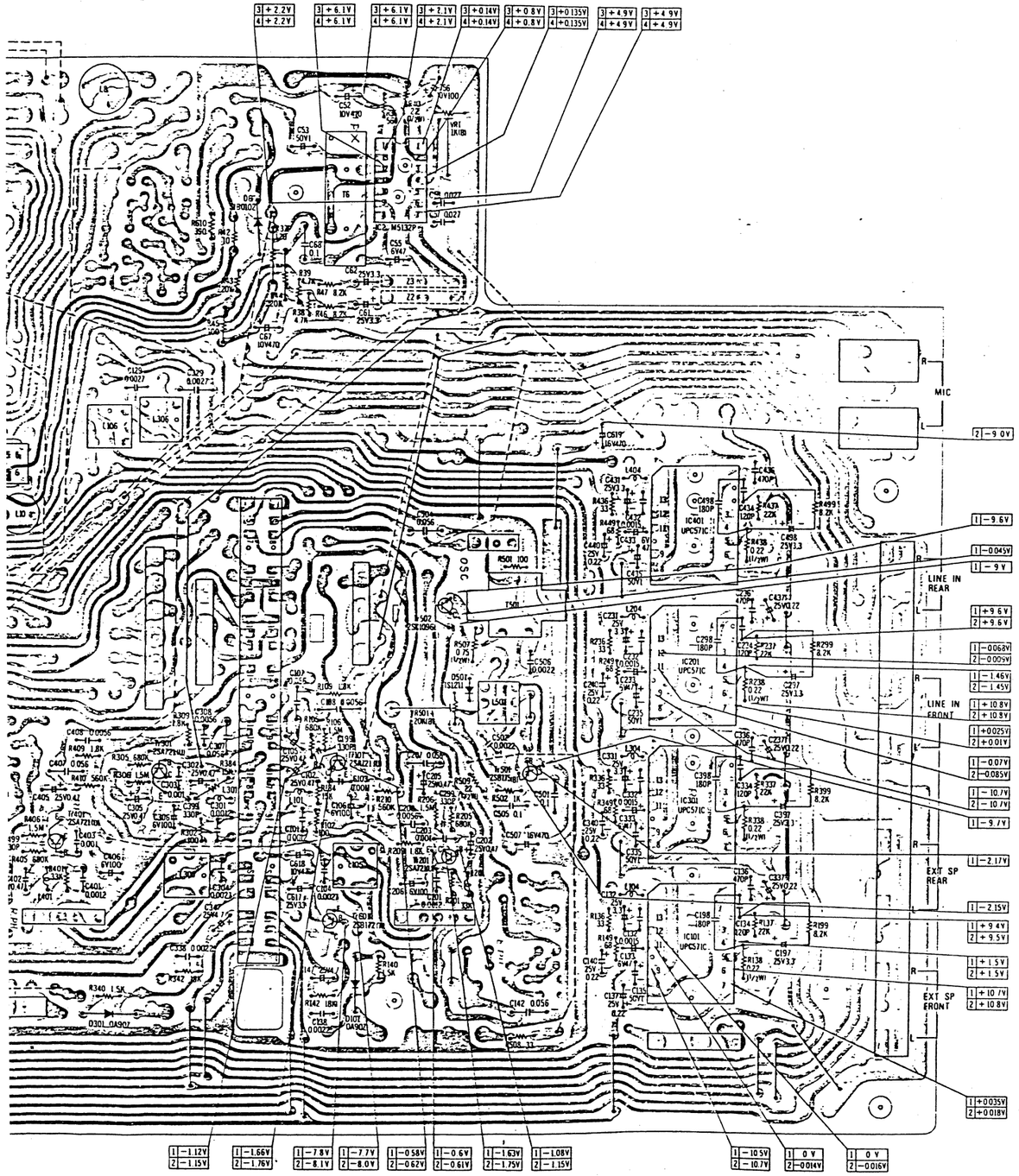


RADIO CIRCUIT BOARD

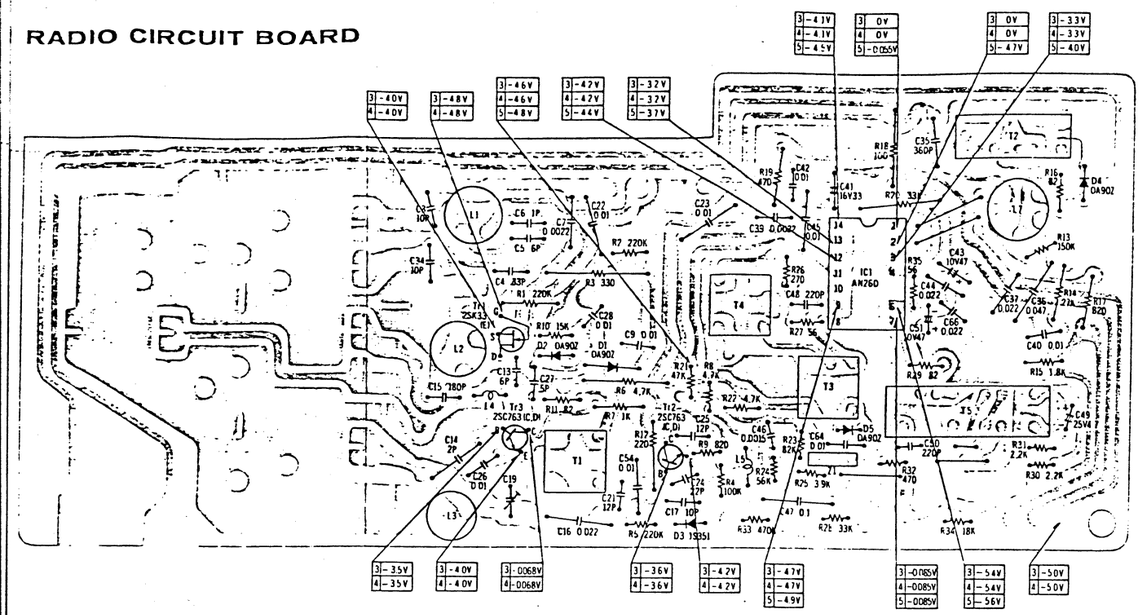


POWER CIRCUIT BOARD

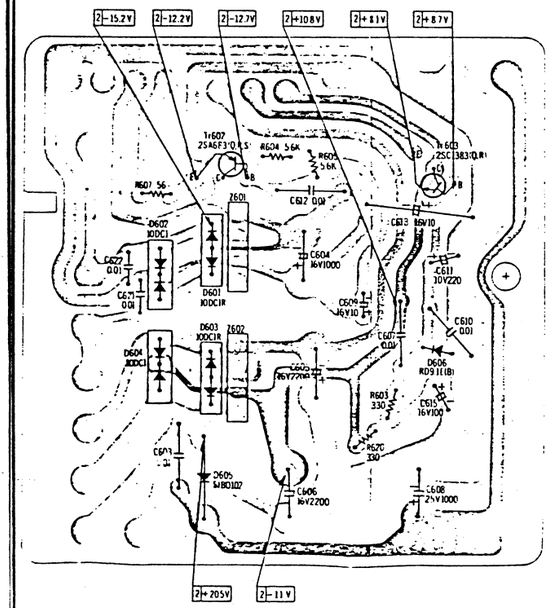




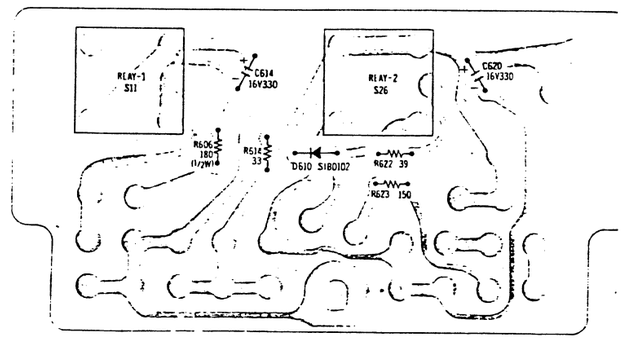
RADIO CIRCUIT BOARD



POWER CIRCUIT BOARD



CONTROL CIRCUIT BOARD



NOTE:

The circuit shown in green on the conductor is +B circuit.
The circuit shown in red on the conductor is −B circuit.
Values indicated in ▭ are DC voltages between the chassis and electrical part.
Numerals show values of voltage at.....
1...8-Track recording. 2...8-Track playback. 3...FM mono.
4...FM auto. and 5...AM, respectively.

Remarque:

Le circuit du +B est identifié en vert.
Le circuit du −B est identifié en rouge.
Les valeurs indiquées de la façon suivante: ▭ sont des tensions continues mesurées entre le châssis et les points chauds.
Les nombres indiquent la valeur des tensions à.....
1...enregistrement 8 pistes, 2...lecture 8 pistes, 3...FM mono, 4...FM auto et 5...AM, respectivement.

STANDARD VOLTAGE CHART

Tableau des tensions standard

Check Point	8-Track		FM		AM
	Recording	Playback	Mono	Auto	
Point de mesure	8-piste		FM		AM
	Enregistrement	Lecture	Mono	Auto	
①		AC 117V			
②		AC 8.2V			
③		AC 8.2V			
④		AC 15.2V			
⑤		AC 11.8V			
⑥		−11V			
⑦		+10.8V			
⑧		−15.2V			
⑨		+8.1V			
⑩		+6.7V			
⑪		−12.2V			
⑫		−12.7V			
⑬			−4.8V	−4.8V	
⑭			−4.0V	−4.0V	
⑮			−3.5V	−3.5V	
⑯			−0.068	−0.068	
⑰			−4.0V	−4.0V	
⑱			−3.6V	−3.6V	
⑲			−4.2V	−4.2V	
⑳			−5.0V	−5.0V	
㉑			−3.3V	−3.3V	−4.0V
㉒			0V	0V	−4.7V
㉓			0V	0V	−0.055V
㉔			−3.2V	−3.2V	−3.7V
㉕			−4.1V	−4.1V	−4.5V
㉖			−4.6V	−4.6V	−4.8V
㉗			−4.2V	−4.2V	−4.4V
㉘			−4.7V	−4.7V	−4.9V
㉙			−5.4V	−5.4V	−5.6V
㉚			−0.085V	−0.085V	−0.085V
㉛	−7.7V	−8.0V			
㉜	−7.8V	−8.1V			
㉝	−1.12V	−1.15V			
㉞	−1.66V	−1.76V			
㉟	−0.58V	−0.62V			
㊱	−1.78V	−1.9V			
㊲	−1.16V	−1.28V			
㊳	−4.8V	−5.8V			
㊴	−1.4V	−1.5V			

Check point	8-Track		FM		AM
	Recording	Playback	Mono	Auto	
Point de mesure	8-piste		FM		AM
	Enregistrement	Lecture	Mono	Auto	
㊵	−1.25V	−1.35V			
㊶	0V	−0.015V			
㊷	+9.4V	+9.5V			
㊸	+1.5V	+1.5V			
㊹	+10.7V	+10.8V			
㊺	+0.035V	+0.018V			
㊻	−10.5V	−10.7V			
㊼	0V	−0.014V			
㊽	−1.08V	−1.15V			
㊾	−1.63V	−1.75V			
㊿	−0.6V	−0.61V			
(51)	−1.75V	−1.8V			
(52)	−5.1V	−5.4V			
(53)	−1.18V	−1.25V			
(54)	−0.068V	−0.009V			
(55)	+9.6V	+9.6V			
(56)	+1.46V	+1.45V			
(57)	+10.8V	−10.8V			
(58)	+0.025V	−0.01V			
(59)	−10.7V	−10.7V			
(60)	−0.07V	−0.085V			
(61)	−2.17V				
(62)	−9.7V				
(63)	−2.15V				
(64)	−9.0V				
(65)	−0.045V				
(66)	−9.6V				
(67)			+2.1V	+2.1V	
(68)			+6.1V	+6.1V	
(69)			+6.1V	+6.1V	
(70)			+2.2V	+2.2V	
(71)			+4.9V	+4.9V	
(72)			+4.9V	+4.9V	
(73)			+0.135V	+0.135V	
(74)			+0.8V	+0.8V	
(75)			+0.14V	+0.14V	
(76)		+20.5V			
(77)		+9.0V			

NOTE: All measurements are under no signal conditions with volume at minimum position.
Use VTVM for voltage measurements.

Remarques: Toutes les mesures sont effectuees en l'absence de signal, avec le volume au minimum.
Pour les mesures de tension, utiliser un "VTVM".

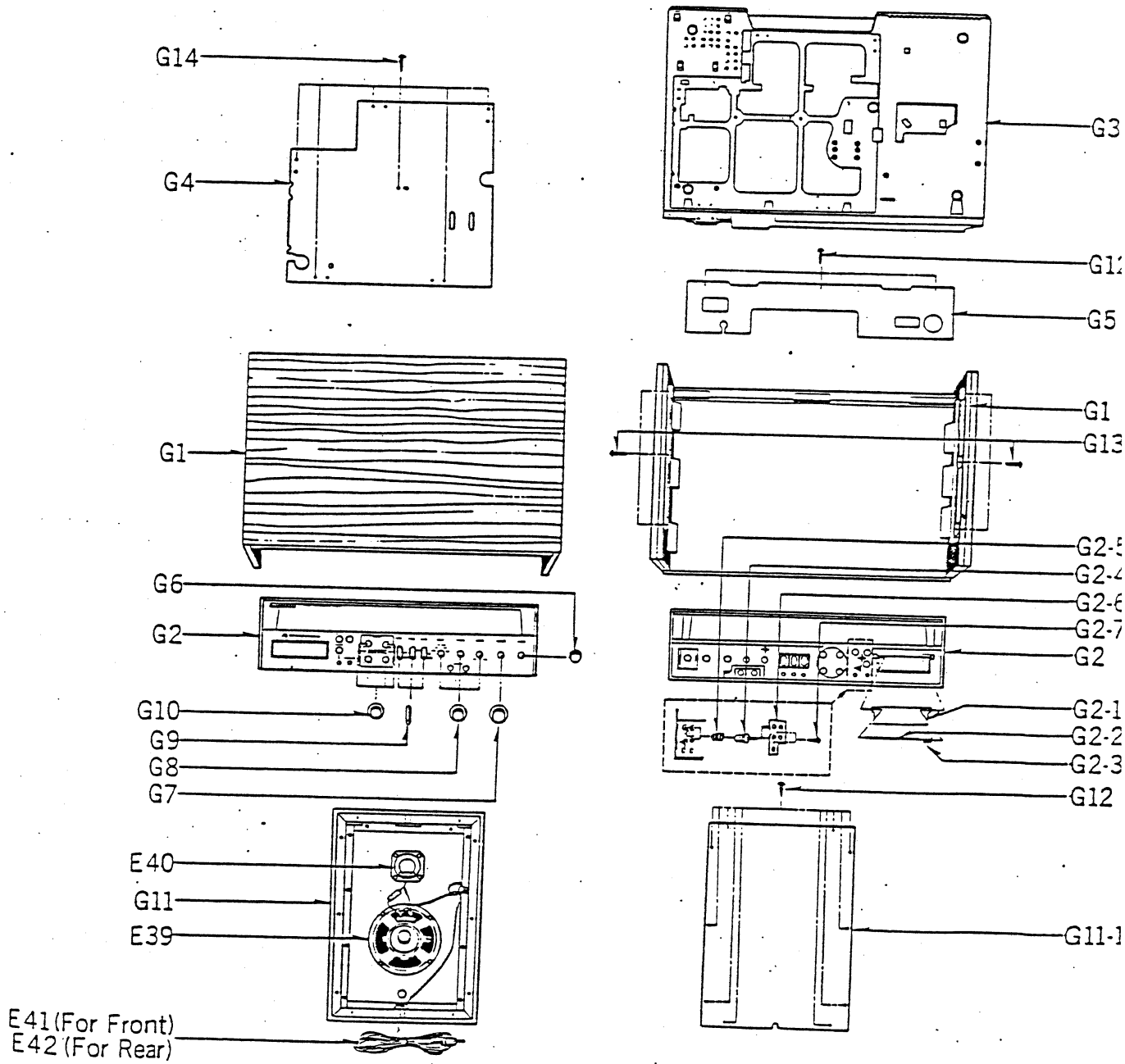
NOTE:

1. S1-1~S1-19 ——— Record/playback select switch.
2. S3-1~S3-6 ——— Function switch.
   1...Line in, 2...Phono, 3...8-Track, 4...FM mono,
   5...FM auto, 6...AM.
3. S4-1~S4-7 ——— Mode switch.
4. S5-1~S5-4 ——— Monitor switch.
   1...High, 2...Low, 3...Off.
5. S7-1, S7-2 ——— Fast forward switch.
6. S8 ——— Program selection switch.
7. S10 ——— Sensing switch.
8. S11 ——— Relay switch (R/1).
9. S12 ——— 8-track squelch switch.
10. S14 ——— 8-track motor switch.
11. S17-1, S17-2 ——— Program indication switch.
12. S19 ——— Power switch.
13. S20 ——— AFC switch.
14. S23 ——— FF. OFF switch (OFF at recording).
15. S26 ——— Relay switch (R/2, A...Break, B...Make).
16. VR1 ——— FM stereo separation adjust VR.
17. VR101, 201, 301, 401 ... Volume control.
18. VR102, 202, 302, 402 ... Balance control.
19. VR103, 203, 303, 403 ... Tone control.
20. VR501 ——— Erase current adjust VR.
21. Resistor symbols made thick show printed type resistors.
22. Resistor values are in ohms (Ω), 1/4 watts unless specified otherwise.
    K = 1,000Ω.
23. Capacitor values are in microfarads (μF) unless specified otherwise.
    P = Pico-farads.
24. Encircled numbers (○) show the checkpoints for voltage.
    The value are marked in the standard voltage chart.

Notes:

1. S1-1~S1-19 ——— Sélecteur enregistrement/lecture.
2. S3-1~S3-6 ——— Sélecteur de fonctions:
   1...Alimentation, 2...Phono, 3...8 pistes,
   4...FM mono, 5...FM auto, 6...AM.
3. S4-1~S4-7 ——— Commutateur de modes.
4. S5-1~S5-4 ——— Commutateur de contrôle:
   1...Haut, 2...Bas, 3...Hors.
5. S7-1, S7-2 ——— Interrupteur d'avance accélérée.
6. S8 ——— Sélecteur de programmes.
7. S10 ——— Interrupteur sensible.
8. S11 ——— Interrupteur relais (R/1).
9. S12 ——— Interrupteur du réglage silencieux 8 pistes.
10. S14 ——— Interrupteur moteur 8 pistes.
11. S17-1, S17-2 ——— Interrupteur d'indication des programmes.
12. S19 ——— Interrupteur d'alimentation.
13. S20 ——— Commutateur "AFC".
14. S23 ——— Commutateur avance accélérée, hors
    (hors sur enregistrement).
15. S26 ——— Interrupteur relais (R/2, A...Pause, B...Fermeture.)
16. VR1 ——— Résistance variable pour le réglage de séparation
    stereo FM.
17. VR101, 201, 301, 401 ——— Commande de volume.
18. VR102, 202, 302, 402 ——— Commande d'équilibre.
19. VR103, 203, 303, 403 ——— Commande de tonalité.
20. VR501 ——— Résistance variable de réglage du contrast
    d'effacement.
21. Les symboles de résistances en traits gras indiquent qu'il s'agit de
    résistances imprimées.
22. Les valeurs de résistance sont exprimées en ohms (Ω), 1/4 watt sauf
    indication contraire.
    K = 1,000Ω.
23. Les valeurs de capacité sont exprimées en microfarads (μF), sauf indications
    contraire.
    P = pico-farads.
24. Les chiffres encerclés (○) représentent les points de mesure des tensions.
    Valeurs notées au tableau des tensions standard.

CABINET PARTS

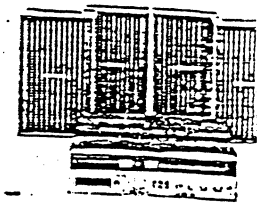


REPLACEMENT PARTS LIST

Liste des piceès de rechange

MODEL RS-862S (Panasonic)

Modèle RS-862S (Panasonic)



RS-862

ATTENTION:

1. Be sure to make your orders of Replacement parts according to this List.
2. "(ISO)" indicates the ISO Screw or Nut.
3. "✿" indicates the serrated parts with 18 notches.

Attention:

1. Se référer à cette liste pour commander les pièces de rechange.
2. "(ISO)" indique une vis ou un écrou "ISO" (International Organization for Standardization).
3. "✿" indique les pièces dentelées avec 18 encoches.

Ref. No.	Description	Part No.	Per Set (Pcs.)		Note
	MECHANICAL PARTS				
M1	Tapping Screw ⊕3×8	XTB3+8B	13		COMMON
M2	Tape Guide	QXZ0025	1		
M3	Screw ⊖3×10	XSN3−10S	1		COMMON (ISO)
M4	Head Clamper	QMA2244	1		RS-805US
M5	Head Flat Spring	QXJ0101	1		RS-801US. 805US. 817S. 844US
M6	Head Height Adjust Screw	QHQ1189	1		"
M7	Screw ⊕3×6	XSN3+6S	2		COMMON (ISO)
M8	Spring Washer 3ϕ	XWA3B	3		"
M9	Head Angle Adjust Spring	QBC1166	1		RS-801US. 805US. 844US. 858US
M10	Head Plate	QXH0179	1		RS-801US. 805US. 817S. 844US
M11	Head Pressure Spring	QBC1221A	1		"
M12	Tapping Screw ⊕3×12	XTB3+12B	3		COMMON
M13	Motor	QDM1311	1		RS-805US. 817S
M13-1	Eyelet	QMP1418	3		"
M13-2	Rubber Cushion	QBG1349	3		RS-801US. 805US. 817S. 844US
M13-3	Motor Pulley	QDP1548	1		RS-805US. 817S
M13-4	Screw 3×5	XXE3D5FZS	1		COMMON (ISO)
M14	Belt	QDB0177	1		RS-805US. 817S
M15	Ratchet Spring	QMF1611C	1		RS-805US
M16	Cam Stopper	QGG0007A	1		RS-801US. 805US. 817S. 844US
M17	Rubber Washer	QBW2002A	1		RS-284S
M18	Plunger Spring	QBC1220	1		RS-801US. 805US. 817S. 844US
M19	Plunger	QME0140A	1		RS-805US. 817S (ISO)
M20	Lock Holding Plate	QML2531	1		RS-801US. 805US. 817S. 844US
M21	Lock Holder Spring	QBT1682	1		"
M22	Stop Ring 3ϕ	XUC3FT	4		COMMON

Ref. No.	Description	Part No.	Per Set (Pcs.)		Note
M23	Screw ⊕3×6	XYN3+C6S	5		COMMON (ISO)
M24	Screw	QHQ1182	2		RS-817S. 855US. 858US
M25	Lock Washer 2.3φ	XWC23B	2		COMMON
M26	Stop Ring 2φ	XUC2FT	1		"
M27	Tetoron Washer	QBJ3099	2		RQ-209DS. RS-257DS. 280AS. 817S
M30	Switch Angle	QMA2242	1		
M31	Wire Guide	QTD1218	1		
M32	Cam	QMD0002	1		RS-801US. 805US. 817S. 844US
M33	Back Tension Spring	QBCT0005	1		RQ-224AS. 430S. RS-264S. 817S
M34	Screw ⊕3×25	XSN3+25S	2		COMMON (ISO)
M35	Lock Washer 3φ	XWC3B	2		"
M36	Switch Lever	QXL0807	1		
M37	Cartridge Guide	QXZ0018	1		(ISO)
M38	Roller	QDP1547	2		RS-801US. 805US. 817S. 844US
M39	Record Lever-B Spring	QBT1691M	2		RS-801US. 844US
M40	Record Lever-B	QML2690	1		
M41	Switch Lever Spring	QBT1070	1		RQ-102S. 203S. 232S. RS-252S
M42	Record Lever-A	QML2691	1		
M43	Record Lever Unit	QXL0839	1		(ISO)
M44	Reinforcement Angle	QMA2384	1		
M45	Record Lever Spring	QBP1563	1		
M46	Record Lever Angle	QXL0838	1		
M47	Record Selector Spring	QBT1264	1		
M48	Record Adjust Angle	QMA2296	1		
M49	Record/Playback Select Lever	QXL0837	1		(ISO)
M50	Stop Ring E5φ	XUC5FT	2		COMMON
M51	Select Lever Angle	QXL0814	1		
M52	Lock Lever-2 Unit	QXL0835	1		
M53	Lock Lever Spring	QBT1686T	1		
M55	Flywheel Metal Unit	QXM0134	1		RS-801US. 805US. 817S. 844US
M56	Poly Washer 5.2×8×0.25	QBJ3217	1		RS-740US. 805US. 817S. 844US
M57	Flywheel	QXF0089	1		RS-284S. 801US. 805US. 817S
M58	Flywheel Retainer	QXA0203	1		RS-801US. 805US. 817S. 844US
M59	Screw ⊕3×4	XSN3+4S	1		COMMON (ISO)
M60	Angle	QMA2209	1		

Ref. No.	Description			Part No.	Per Set (Pcs.)		Note
	RESISTORS						
R1.2.5.43.44	Carbon Resistor	220 KΩ	1/4 W	ERD14VJ224	5		
R3.603.620	"	330Ω	1/4 W	ERD14VJ331	3		
R4	"	100 KΩ	1/4 W	ERD14VJ104	1		
R6.8.22.346	"	4.7 KΩ	1/4 W	ERD14VJ472	4		
R7.502	"	1 KΩ	1/4 W	ERD14VJ102	2		
R9.17	"	820Ω	1/4 W	ERD14VJ821	2		
R10.184.384	"	15 KΩ	1/4 W	ERD14VJ153	3		
R11.16.29.130.230.330.430							
	"	82Ω	1/4 W	ERD14VJ820	7		
R12	"	220Ω	1/4 W	ERD14VJ221	1		
R13	"	150 KΩ	1/4 W	ERD14VJ154	1		
R14	"	27 KΩ	1/4 W	ERD14VJ273	1		
R15.109.209.309.409							
	"	1.8 KΩ	1/4 W	ERD14VJ182	5		
R18.45.102.302.501	"	100Ω	1/4 W	ERD14VJ101	5		
R19.32	"	470Ω	1/4 W	ERD14VJ471	2		
R20.28.201.401	"	33 KΩ	1/4 W	ERD14VJ333	4		
R21.131.231.331.431	"	47 KΩ	1/4 W	ERD14VJ473	5		
R23.615	"	82 KΩ	1/4 W	ERD14VJ823	2		
R24	"	56 KΩ	1/4 W	ERD14VJ563	1		
R25	"	3.9 KΩ	1/4 W	ERD14VJ392	1		
R26	"	270Ω	1/4 W	ERD14VJ271	1		
R27.35.607	"	56Ω	1/4 W	ERD14VJ560	3		
R30.31.38.39	"	2.2 KΩ	1/4 W	ERD14VJ222	4		
R33	"	470 KΩ	1/4 W	ERD14VJ474	1		
R34.142.342	"	18 KΩ	1/4 W	ERD14VJ183	3		
R36	"	560Ω	1/4 W	ERD14VJ561	1		
R37	"	120Ω	1/4 W	ERD14VJ121	1		
R40.509	Solid Resistor	22Ω	1/2 W	ERC12GM220	2		
R41	"	3.3 MΩ	1/2 W	ERC12GM335	1		
R42	Carbon Resistor	10Ω	1/4 W	ERD14VJ100	1		
R46.47.125.199.299.325.399.499							
	"	8.2 KΩ	1/4 W	ERD14VJ822	8		

Ref. No.	Description			Part No.	Per Set (Pcs.)		Note
R105.132.205. 305.332.405	Carbon Resistor	680 KΩ	1/4 W	ERD14VJ684	6		
R106.206.226. 306.406.426	Solid Resistor	1.5 MΩ	1/4 W	ERC14GM155	6		
R122.227.322. 427	Carbon Resistor	1 MΩ	1/4 W	ERD14VJ105	4		
R133.233.333. 433	"	1.2 KΩ	1/4 W	ERD14VJ122	4		
R136.236.336. 436.508.614	"	33Ω	1/4 W	ERD14VJ330	6		
R137.237.337. 437	"	22 KΩ	1/4 W	ERD14VJ223	4		
R138.238.338. 438	Wire-wound Resistor	0.22Ω	1/2 W	ERM12PKR22	4		
R139. 339	Solid Resistor	82Ω	1/2 W	ERC12GM820	2		
R140. 340	Carbon Resistor	1.5 KΩ	1/4 W	ERD14VJ152	2		
R143.243.343. 443	Solid Resistor	120Ω	1/2 W	ERC12GM121	4		
R149.249.349. 449	Carbon Resistor	68Ω	1/4 W	ERD14VJ680	4		
R210.221.410. 421	"	560 KΩ	1/4 W	ERD14VJ564	4		
R507	Wire-wound Resistor	0.75Ω	1/2 W	ERM12PKR75	1		
R604. 605	Carbon Resistor	5.6 KΩ	1/4 W	ERD14VJ562	2		
R606	Solid Resistor	180Ω	1/2 W	ERC12GM181	1		
R610	Carbon Resistor	390Ω	1/4 W	ERD14VJ391	1		
R616	"	15Ω	1/4 W	ERD14VJ150	1		
R621	"	18Ω	1/4 W	ERD14VJ180	1		
R622	"	39Ω	1/4 W	ERD14VJ390	1		
R623	"	150Ω	1/4 W	ERD14VJ151	1		
	VARIABLE RESISTORS						
VR1	Semi-fixed Variable Resistor	1 KΩ (B)		QVL01AA00B13	1		RS-253S
VR101. 201. 301. 401	Volume Control	50 KΩ (A)		EVIOYAK45A54	1		G
VR102. 202. 302. 402	Balance Control	20 KΩ (D)		EVHB0AK25D24	4		G
VR103. 203. 303. 403	Tone Control	10 KΩ (D)		EVB98AK45D14	1		G
VR501	Semi-fixed Variable Resistor	20 KΩ (B)		QVL01AA00B24	1		RQ-432S. RS-855US
	CAPACITORS						
C1. 2. 10. 11. 18. 29. 30. 32. 33							
	Variable Capacitor			ECV5MD34X35A	1		
C3. 17. 31. 34	Ceramic Capacitor		10 pF	ECCD1H100FC	4		
C4	"		33 pF	ECCD1H330K	1		
C5. 13	"		6 pF	ECCD1H060DC	2		
C6	"		1 pF	ECCD1H010CC	1		

Ref. No.	Description		Part No.	Per Set (Pcs.)		Note
C7. 39	Ceramic Capacitor	0.0022μF	ECKD1H222M	2		
C9. 22. 23. 26.	28. 40. 42. 45. 54. 64.					
	"	0.01μF	ECKD1H103P	10		
C14. 69	"	2 pF	ECCD1H020C	2		
C15	"	180 pF	ECCD1H181K	1		
C16	"	0.022μF	ECKD1H223P	1		
C19	Trimmer Capacitor		ECV1ZW10P32	1		
C21. 25	Ceramic Capacitor	12 pF	ECCD1H120KC	2		
C24	"	22 pF	ECCD1H220KC	1		
C2[illegible]	"	5 pF	ECCD1H050D	1		
C35	Styrol Capacitor	360 pF	ECQS1361JZ	1		
C36	Mylar Capacitor	0.047μF	ECQM05473MZ	1		
C37. 44. 66	"	0.022μF	ECQM05223MZ	3		
C41	Electrolytic Capacitor	33μF	ECEA16V33L	1		
C43. 51. 618	"	47μF	ECEA10V47L	3		
C46. 132. 232.	332. 432					
	Mylar Capacitor	0.0015μF	ECQM05152MZ	5		
C47. 68. 145. 2	45. 345. 445. 501. 505					
	"	0.1μF	ECQM05104MZ	8		
C48	Ceramic Capacitor	220 pF	ECKD2H221K	1		
C49	Electrolytic Capacitor	4.7μF	ECEB25V4R7L	1		
C50	Styrol Capacitor	220 pF	ECQS1221KZ	1		
C52. 67	Electrolytic Capacitor	470μF	ECEA10V470L	2		
C53. 121. 135.	235. 321. 335. 435					
	"	1μF	ECEA50V1L	7		
C55. 133. 233. 333. 433	"	47μF	ECEA6V47L	5		
C56	"	100μF	ECEA10V100L	1		
C57. 58	Mylar Capacitor	0.027μF	ECQM05273MZ	2		
C59. 60	"	0.0047μF	ECQM05472MZ	2		
C61. 62. 123. 1 331. 421. 427	27. 131. 221. 227. 231. 323. 327. 431					
	Electrolytic Capacitor	3.3μF	ECEA25V3R3L	14		
C65	Ceramic Capacitor	100 pF	ECKDAL101MB	1		
C101.201.301. 401	Mylar Capacitor	0.0012μF	ECQM05122MZ	4		
C102. 105. 202	205. 302. 305. 402. 405					
	Aluminum Capacitor	0.47μF	ECAG25ER47	8		

Ref. No.	Description		Part No.	Per Set (Pcs.)		Note
C103. 122. 126. 203. 223. 303. 322. 326. 403. 423						
	Ceramic Capacitor	1000 pF	ECKD1H102PD	10		
C104.129.304. 329	Mylar Capacitor	0.0027μF	ECQM05272MZ	4		
C106. 128. 206. 228. 306. 328. 406. 428						
	Electrolytic Capacitor	100μF	ECEA6V100L	8		
C107. 142. 207. 307. 342. 407. 504						
	Mylar Capacitor	0.056μF	ECQM05563MZ	7		
C108.208.308. 408	"	0.0056μF	ECQM05562MZ	4		
C124.324.609	Electrolytic Capacitor	10μF	ECEA16V10L	3		
C130.230.330. 430	Mylar Capacitor	0.068μF	ECQM05683MZ	4		
C134.234.334. 434	Ceramic Capacitor	120 pF	ECCD1H121K	4		
C136.236.336. 436	"	470 pF	ECKD1H471MB9	4		
C137. 140. 237. 240. 337. 340. 437. 440						
	Aluminum Capacitor	0.22μF	ECAG25ER22	8		
C138.144.244. 338.344.444	Mylar Capacitor	0.0022μF	ECQM05222MZ	6		
C139.239.339. 439	Electrolytic Capacitor	2.2μF	ECEB25V2R2	4		
C146. 346	Aluminum Capacitor	0.33μF	ECAG25ER33	2		
C147. 347	Electrolytic Capacitor	4.7μF	ECEA25V4R7L	2		
C197.297.397. 497	"	3.3μF	ECEB25V3R3L	4		
C198.298.398. 498	Ceramic Capacitor	180 pF	ECCD1H181K	4		
C199.299.399. 499	"	330 pF	ECCD1H331K	4		
C502. 506	Styrol Capacitor	2200 pF	ECQS5222J	2		
C503	Mylar Capacitor	0.033μF	ECQM05333MZ	1		
C507. 619	Electrolytic Capacitor	470μF	ECEA16V470L	2		
C603.607.610. 612.621.622	Ceramic Capacitor	0.01μF	ECKD1H103PM	6		
C604	Electrolytic Capacitor	1000μF	ECEA16V1000L	1		
C605. 606	"	2200μF	ECEA16V2200L	2		
C608	"	1000μF	ECEA25V1000L	1		
C611	"	220μF	ECEA10V220L	1		
C613	"	10μF	ECEB16V10L	1		
C614. 620	"	330μF	ECEA16V330L	2		
C615	"	100μF	ECEA16V100L	1		
C617	"	33μF	ECEA25V33L	1		

Ref. No.	Description	Part No.	Per Set (Pcs.)		Note
	COMBINATION PARTS				
Z1	CR Combination	EXAF203Z471	1		RQ-432S. 437S. RS-817S. 818S
Z2. 3	"	EXA6FD04	2		RS-817S
Z601. 602	Compound Capacitor	B4BC0802	2		"
	TRANSISTORS				
Tr1	Transistor	2SK33(E)	1		RS-257AS. 264S. 282S 818S
Tr2. 3	"	2SC763(C.D)	2		RS-817S
Tr101. 201. 301. 401	"	2SA721(U)	4		"
Tr103. 303	"	2SA666H(R)	2		RQ-262US
Tr104. 304	"	2SB173(D)	2		RQ-435S
Tr202. 402	"	2SA721(T)	2		RS-817S
Tr501	"	2SB175(B)	1		RS-257S. 264S
Tr502	"	2SC1096(L)	1		
Tr601	"	2SB172(A)	1		RQ-413S. 432S. RS-817S. 855US
Tr602	"	2SA683(Q.R.S)	1		RS-264S. 817S. 876S
Tr603	"	2SC1383(Q.R)	1		
	INTEGRATED CIRCUITS				
IC1	IC (AM. FM. IF)	AN260	1		RS-817S
	IC (FM. MPX)	M5132P	1		"
IC101. 201. 301. 401	IC (Audio Power AMP)	UPC571C	4		"
	DIODES & RECTIFIERS				
D1.2.4.5.103. 301	Diode	OA90Z	6		RQ-226S. 437S. RS-253S. 760S
D3	"	1S351	1		
D6. 605. 607. 610	Silicon Diode	SIB0102	4		
D501	Diode	1S1211	1		
D601. 603	Silicon Rectifier	10DC1R	2		RQ-209S. 236S. RS-276US. 855US
D602. 604	"	10DC1	2		RQ-236DS. 448S. RS-277US. 855US
D606	Diode	RD9.1E(B)	1		
	TRANSFORMERS				
T1. 4	FM IFT with Ceramic Filter	SFL10.7MB (A.B.C.D.E)	2		RS-817S

Ref. No.	Description	Part No.	Per Set (Pcs.)		Note
T2	AM IFT with Ceramic Filter	QLI0105	1		RS-817S
T3	AM IFT	QLIQ104	1		"
T5	FM IFT	EULBFD102(A)	1		"
T6	19/38kHz Tuning Transformer	EULBMC001K	1		"
T501	Record Bias Output Transformer	QLB0138	1		RS-818S. 820S. 855US. 864S
T601	Power Transformer	QLPW1LME	1		
	COILS				
L1	FM Antenna Coil	RLA4P7	1		
	FM Collector Coil	RLD4N21	1		
L3	FM Local Oscillator Coil	RLO4N41	1		
L4	IF Trap Coil	RLQY11G1	1		
L5	Choke Coil	RLQY21G1	1		RS-817S
L6	AM Ferrite Core Antenna	QLR0107A	1		
L7	AM Local Oscillator Coil	ELL10P57	1		RS-817S
L8	Trap Coil	QLH2011	1		RS-253S. 257DS. 818S. 864S
L9. 10	"	QCRCFP1	2		
L11. 12	Line Filter Coil	QLH1011	2		RS-257S. 820S. 818S. 876S
L101. 103. 104. 201. 203. 204. 301. 303. 304. 401. 403. 404					
	Choke Coil	ELQ3A9	12		RS-257AS. 267S. 864S. 876S
L105.106.305. 306	Trap Coil	ELM10S122	4		RS-253S. 257DS. 264S. 876S
11	Record Bias Oscillator Coil	QLB0141	1		
L601	Choke Coil	QLH1012	1		RS-280AS
	JACKS				
J2. 3	M3 Jack (MIC)	QJA0125	2		RQ-421S. 432S. 437S. RS-817S
J14. 15	Headphone Jack	QJA0229	2		RS-818S
J17	5P Jack	QJS0740	1		RS-864S
	PILOT LAMPS				
PL1	Pilot Lamp (Stereo Eye)	XAMQ21P300	1		RQ-448S
PL2. 3. 4. 5. 6	Pilot Lamp (Program Indication. Record Indication)	XAMQ23P300	5		
PL7. 8	Pilot Lamp (2/4-CH Indication)	XAMQ23P200G	2		
PL9. 18	Pilot Lamp (Dial Indication)	XAMQ23P400	2		RS-817S
PL10. 11	Pilot Lamp (Level Meter)	XAMQ23P200	2		

Ref. No.	Description	Part No.	Per Set (Pcs.)		Note
PL12. 13	Pilot Lamp (Dial Scale)	XAM43T	2		RS-253S. 264S. 280S. 817S
PL17	Pilot Lamp (2-CH Indication)	XAMQ23P200R	1		
	SWITCHES				
S1	Slide Switch (Record/Playback Select)	QSS1161	1		RS-855US
S3	Rotary Switch (Function)	QSR0023	1		⊙
S4	Lever Switch (Mode)	QST6301H	1		
S5	Lever Switch (Monitor)	QST4301H	1		
S7	Push Switch (FF)	ESB504	1		RS-270US. 864S
S8	Push Switch (Program Select)	QSW0116S	1		RS-804US. 847US. 864S
S10	Sensing Switch (Coupled with Tape Guide Refer to M2)		(1)		
S11. 26	Relay Switch	QSK0123A	2		RS-855US. 858US. 864S. 868US
S12	Micro Switch (Squelch)	QSM0064	1		
S14	Micro Switch (Motor ON/OFF)	QSM0064	1		
S17	Rotary Switch (Program Indicator)	QSR2402T	1		⊙
S19	Push Switch (Power ON/OFF)	QSW0123S	1		RS-296US
S20	Lever Switch (AFC)	QST0042S	1		RS-284S
S23	Micro Switch (FF, OFF)	QSM0040A	1		RS-284S. 817S
	ELECTRICAL PARTS				
E1	Fuse Holder	QTF1049	2		
E2	Level Meter	QSL1039L	2		
E3	Lamp Cover	QBG1222	6		RS-817S
E4	Headphone Jack Nut	QNQ1033	2		RS-270US. 740US
E5	Tuning Shaft	QMN1803	1		⊙
E6	Tuning Flywheel	QDW1070	1		
E7	Switch Holding Screw	QHQ1188S	1		ISO
E8	Dial Scale	QGD0123	1		
E9	5P Mold Socket	QJS0749	2		
E10	5P Mold Plug	QJP0985	2		
E11	Jack Holder	QKJ0011	2		RS-817S
E12	8P Jack Board	QJA0436	1		
E13	Jack Board	QGJ1264	1		
E14	Connector Terminal	TJT885A	8		RS-817S
E15	4P Connector Houshing	TJT683A	2		

Ref. No.	Description	Part No.	Per Set (Pcs.)		Note
E16	3P Mold Socket	QJS0745	1		RS-817S
E17	3P Mold Plug	QJP0979	1		"
E18	Dial Indicator Guide	QGG0033	1		RS-284S
E19	Dial Indicator	QKT1729	1		
E20	Roller Set Washer	QBJ2167	1		
E21	Dial Roller	QDP1478	6		RS-284S
E22	Dial Rope	RDZ05A	1		RQ-448S
E23	Dial Indicator Guide Angle	QXZ0013	1		
E24	Lamp Cover (Level Meter & Stereo Eye)	QBG1395	3		RS-817S
E25	Lamp Cover (2/4 CH Indicator)	QBG1448A	1		
E26	Head	WY806	1		RS-818S
E27	3P Jack Board	QJA0439	1		
E28	Wire Clamper	QTD1220	1		
E29	Heat Sink	QTH1103	1		
E30	"	QTH1080	1		
E31	Cord Bushing	QTD1129	1		RS-817S. 858US
E32	AC Cord	QFC1016A	1		RS-765US. 790S
E33	Antenna Terminal Board	QJT0049A	1		RS-817S
E34	Roller Angle-B	QXA0273	1		
E35	Dial Spring	QBT1268	1		RS-257AS. 817S. 864S
E36	Dial Drum	QEQ1082S	1		RS-257AS. 257S. 817S (ISO)
E37	Roller Angle-A	QXA0272	1		
E38	4P Terminal Board	QJT4010	2		RS-284S.801US.805US. 844US
E39	Speaker (Woofer)	EAS16P24SN	4		RS-253S. 282S. 820S. 876S
E40	Speaker (Tweeter)	EAS65PH14S	4		RS-257AS. 257DS. 257S
E41	Speaker Cord-F (3 m)	QFC2068	2		RS-284S
E42	Speaker Cord-R (7.5 m)	QFC2083	2		
	CABINET PARTS				
G1	Wooden Case Assembly	QYW0026A	1		
G2	Panel Assembly	QYP0504	1		
G2-1	Cartridge Lid	QKF1470	1		
G2-2	Lid Shaft	QMN1684	1		RS-801US. 805US. 817S. 844US
G2-3	Lid Spring	QBN1197	1		
G2-4	Push Button	QXB0235	3		RS-284S

Ref. No.	Description	Part No.	Per Set (Pcs.)		Note
G2-5	Push Button Spring	QBC1231	3		
G2-6	Push Button Guide-A	QGG0049	1		
G2-7	Screw ⊕3×8	XYN3+8S	2		COMMON (ISO)
G3	Bottom Case Assembly	QYM0165	1		
G4	Bottom Board	QKS1119	1		
G5	Back Board	QKS1152	1		
G6	Push Button (Power)	QXB0253	1		
G7	Tuning Knob	QYT0338K	1		K
G8	Volume Knob	QYT0339K	3		K
G9	Lever Knob	QGT1202W1	3		
G10	Balancer Knob	QYT0340K	4		K
G11	Speaker Box (Without Speaker)	QYJ1317SW	4		
G11-1	Back Board for Speaker Box	QKS5096	4		RS-818S. 864S. 876S
G12	Screw ⊕3.1×13	XMM31+13	13		COMMON
G13	Screw ⊕4×10	XSB4+10FZS	6		" (ISO)
G14	Screw ⊕3×10	XTN3+10	6		"
	ACCESSORIES				
A1	Head-Cleaning Bar	QFQ1025	1		RQ-212S. 448S. RS-817S. 818S
A2	Instruction Book	QQT0658	1		English
(A2)	"	QQT0707	1		French
	PACKINGS				
P1	Inside Carton-1	QPN3076	1		
P2	Inner Cushion-A	QPA0092	1		
P3	Inner Cushion-B	QPA0093	1		
P4	Dust Cover	XZB60X80A08	1		RS-282S. 740US. 855US
P5	Pad	QPS0064	1		
P6	Inside Carton-2	QPN3071	1		
P7	Inner Cushion	QPN2769	4		RS-864S
P8	Dust Cover	XZB60X80A05	1		
P9	Pad	QPN2770	1		
P10	"	QPN2771	2		
P11	"	QPS0067	1		